REPORT ON THE PHYSICAL and ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITALS

1914

by

D.A. Carmichael, J.C. Perry and A.Y. Parsons

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I N D E X

Washington, D. C.

June 25, 1915.

To the Honorable,
The Secretary of the Treasury,
Washington, D. C.

Sir:

We have the honor to submit the following general summary of reports of inspection of the Marine Hospitals in the United States, made from October, 1914 to May, 1915, under Departmental orders of October 7th, 1914. Each station was visited in accordance with a previously arranged itinerary and the details relative to land, buildings, location, equipment, etc., inquired into. The work was carried out on an organized plan, so that few things would be overlooked and the reports for each station would as far as possible cover the same items in description, necessities, mechanical and administrative equipment.

The reports are accompanied by photographed sheets showing views of the buildings and grounds and location plans of the different reservations and structures thereon, all of which are submitted.

GENERAL

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With a few exceptions the marine hospitals are placed in desirable localities. The sites in general are sanitary, have sufficient area, elevation, and drainage, to secure abundance of fresh air, sunshine, recreation for the inmates and room for expansion.

They are generally placed in good residential districts in the different cities and convenient to the shipping from which source their patients are derived. Some of the sites have greatly increased in value in the passing years, and few, if any, have depreciated.

Time has caused deterioration in the building structures, and many of them, markedly those of the wooden pavilion class, are in bad repair. This class of cheap construction was not originally designed as permanent structures, but built with the intention of removal after a decade of hospital use.

Those of more substantial structure, such as stone, brick and cement, are in better condition, but with the exception of those recently constructed, do not compare favorably in the arrangement of working units with modern Army, Navy, or Civil institutions of the same kind.

When the marine hospitals are defective in physical conditions it is

due to original cheap construction, lack of needed repairs and alterations, to conform with modern standards; all of which may be traced to insufficient appropriations.

The working equipment is good and practical in most of the marine hospitals but many appliances, accommodations and conveniences in administration work, found in military and civil institutions, are lacking, and this also is due to lack of money to secure these advantages.

PERSONNEL.

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These hospitals are conducted on a military basis with the usual discipline and responsibility for inmates and property.

The medical and clinical service is excellent, but the general working staff about the buildings is too poorly paid to secure those of the highest efficiency. This is particularly marked in the character of the nurses employed. Many of these are without professional training and are paid from thirty to forty dollars per month only.

Within the last year however, steps have been taken to provide the marine hospitals with trained nurses. The other employees designated as attendants, such as engineers, clerks, cooks, and general helpers are as a rule, fairly efficient but are poorly paid.

CONTRAST WITH CIVIL HOSPITALS.

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Marine Hospitals compared with civil hospitals of recent construction and modern design with few exceptions are of old design, planned when hospital architecture was not as far advanced as in the present day, and are therefore somewhat defisient in ward, recreation, examining, operating, isolation, and culinary facilities.

The medical, surgical, nursing and orderly staff is much greater per patient than in Marine Hospitals and nurses and orderlies are better paid. The marine hospitals, however, compare favorably with military and civil hospitals in clinical results, running expenses and per capita cost.

Salaries of medical officers are included in the per capita cost in marine hospitals, but medical services are not included in the per capita cost of civil hospitals.

RECOMMENDATIONS.

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Certain hospitals can be advantageously discontinued. In the case of Cleveland the present site is entirely too valuable for hospital purposes, and a new plant should be provided in a less expensive locality: the money derived from such a sale to be made available, by Congressional action, for this purpose and for the repair and improvement of the other hospitals of the Public Health Service.

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[illegible] liability and responsibility for income and property.

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Briefly the recommendations regarding the various hospitals are as follows:

All Hospitals.

That the repairs and improvements recommended under Section III and incorporated with each station's report, be carried out at each station to be retained, and also at those stations to be disposed of, until final action can be taken.

Hospitals at Portland, Boston, and Mobile.

That the structural alterations necessary for a re-arrangement of the working units to conform to a more modern standard be adopted for the hospitals at Portland, Maine; Boston, Massachusetts; and Mobile, Alabama.

River Hospitals.

That the hospital at Pittsburgh, Pennsylvania, cease to be operated as a hospital, but retained for Public Health Investigations.

That the Hospitals at Louisville, Kentucky, Cairo, Illinois, and Memphis, Tennessee be closed.

That the hospital and land at St. Louis, Missouri, be exchanged for a new site and a hospital erected in a more desirable part of the city.

That new hospital buildings be erected on the present site at Evansville, Ind., to replace existing structures.

That the hospital in Cincinnati, Ohio, discontinued as a hospital in 1905, remain closed, the property being retained for Public Health Investigations, as at present, and the brick buildings placed in a proper condition for such work, and the others removed.

The requirements of the river traffic on the Mississippi, Ohio, and the tributary rivers, do not warrant the continuance of the Marine Hospitals at Memphis, Tenn. Cairo, Ill., Louisville, Ky., and Pittsburgh, Pa.

The hospitals provided at St. Louis, Missouri, Evansville, Indiana, and New Orleans, Louisiana, will, it is believed, be ample to care for the needs of the rivermen requiring treatment. Acute and emergency cases can be taken care of in local hospitals at Memphis, Tennessee, Cairo, Illinois, Louisville, Kentucky, and Pittsburgh, Pennsylvania, in the same manner as at Cincinnati, Ohio.

The continued maintenance of Marine Hospitals at these places is not justified by the small number of patients relieved and the cost thereof. The patients to be treated locally will be less than the number now cared for in the Marine Hospitals, as rivermen will naturally seek treatment en-route, at those places where Government hospitals are maintained.

The hospital at St. Louis is in a part of the city not desirable for hospital purposes on account of the encreachment of manufacturing interests and the dwellings of their employees.

The buildings are of the wooden pavilion type, in poor condition, and not suited to modern hospital requirements. At Evansville, the site is suitable, but the buildings are of the same type as at St. Louis, and equally unsatisfactory for the hospital purposes.

Hospital at Cleveland, Ohio.

That the hospital buildings and land at Cleveland, be sold, that a new hospital be erected in a more desirable part of the city, where land is less expensive and that the proceeds derived from the sale of this property be utilized to defray the cost of this plant, and for the improvement of other hospitals of the Public Health Service.

The sale of the property at Cleveland is recommended on account of its great value for other than hospital purposes, estimated at $1,800,000.00, and the necessity of securing a location more removed from smoke and noise than the present one.

Hospitals at Baltimore and San Francisco.

That new buildings be erected on the present sites to replace existing structures at Baltimore, Md., New Orleans, La., and San Francisco, Cal.

The present buildings at those places are largely of wood; are unsuited to the requirements of modern hospital construction and cannot economically be remodeled or extended to provide satisfactory hospital facilities.

Fort Stanton, New Mexico Sanitarium.

That the Tuberculosis Sanitarium at Fort Stanton, New Mexico, be disposed of and a more suitable location chosen at a lower altitude with better water supply and transportation facilities. It is suggested that a single Sanitarium might profitably be established for the Army, Navy and Public Health Service.

A location on one of the higher plateaus of North or South Carolina or Georgia, with adequate water, fuel and transportation facilities for the Eastern and Middle States, and a smaller institution of like character located in a desirable position on the Pacific is suggested.

ESTIMATE OF FUNDS REQUIRED & RECEIPTS FROM SALES OF PROPERTY.

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To place the Marine Hospitals on a proper basis and provide the facilities demanded by modern practice and the needs of the service will require exclusive of a new tuberculosis sanitarium, the expenditure of $3,023,000.00, divided as follows:

Repairs,	$ 160,000.00
New Construction	2,740,000.00
Equipment,	123,000.00
T O T A L	$3,023,000.00

It is estimated that there will be derived from the sale of property at Cleveland, Ohio, $1,200,000.00.

SUMMARY OF DETAILED STATION REPORTS.

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There are attached herewith summaries of the detailed station reports.

Respectfully.

S A Carmichael
Senior Surgeon, U.S. P.H.S.

H. V. Perry
Supervising Superintendent
of Construction, U.S. P.H.

A. T. Parsons
Civil Engineer, U.S. Navy.

SUMMARY OF MARINE HOSPITAL STATION REPORTS.

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The following are abbreviated reports of inspections of United States Marine Hospitals made from October, 1914, to May, 1915.

Atlantic Coast and Gulf Coast.

(1)	Portland, Me.	(6)	Wilmington, N. C.
(2)	Boston, Mass.	(7)	Savannah, Ga.
(3)	Vineyard Haven, Mass.	(8)	Key West, Fla.
(4)	New York, N. Y.	(9)	Mobile, Ala.
(5)	Baltimore, Md.	(10)	New Orleans, La.

PORTLAND, MAINE.

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(1) **LOCATION AND HISTORY.**

The reservation and buildings are located on Veranda Point, East Deering, Portland, Maine.

Reservation. Comprises 16 acres and 140 rods.

Situation. Desirable for hospital purposes.

Structures. Main hospital building, barn, isolation hospital, fuel building, power house, and ice house.

Site. Purchased in 1858. Cost $11,000.00. Buildings erected and first occupied on July 1, 1859. Cost $84,758.73. Total initial cost of land and buildings, $95,758.73.

(2) **CAPACITY AND RELIEF AFFORDED.**

Bed capacity-Normal 46. Maximum 58.
Floor area per patient based on normal capacity, 72 to 102 sq.ft.
Air space " " " " " " 940 to 1325 cu.ft.

	Fiscal Years 1909	1914
Average daily number of patients.	23	19
Number of hospital patients	270	243
Total daily cost	----	$3.12
Number of out patients.	434	410
Number of times treated.	676	537

Maximum daily number of patients for 1914 was 35.

(3) **ADAPTABILITY OF PLANT.**

The area is ample and the alterations and additions to the buildings recommended under Section III (detailed report of the station) will render it adaptable for present needs. Summary of the work and cost

will be found under paragraph 4.

Should expansion be demanded this can be met by the erection of quarters for officers and attendants and the rearrangement of the interior of the hospital building to conform to modern standards, thus increasing the capacity of the building for ward and executive purposes.

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended:

General repairs and Alterations (Appendix A)	$ 8,315.00
Mechanical & Electrical equipment (Appendix B)	4,240.00
New Construction, heating plant and necropsy building, (Appendix C)	15,000.00
Administrative equipment (Appendix D)	5,208.00
Total -	$32,763.00

BOSTON, MASSACHUSETTS.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located in Chelsea, Mass., on an elevation near the right bank of the Mystic River, and adjoining the United States Navy Hospital Reservation.

Reservation. Comprises ten acres.

Situation. High, well drained and suitable for hospital purposes.

Structures. Main hospital building, isolation building, necropsy building, gate lodge, boiler house, laundry, storehouses, barn, wagon shed, and kitchen storehouse.

Site. Transferred from Navy Reservation to Treasury Department in 1859. (Original Navy Reservation consisting of 115 acres purchased in 1823 at the cost of $18,000.00) Building erected and occupied in 1860, cost $395,000.00 Additional buildings $15,350.00 Total cost of buildings $410,350.00.

(2) CAPACITY AND RELIEF AFFORDED.

Bed Capacity-Normal 108. Maximum 119.
Floor area per patient based on normal capacity, 73 to 90 sq.ft.
Air space " " " " " " 1000 to 1300 cu.ft.

	Fiscal Years. 1909	1914
Average daily number of patients	77	50
Number of hospital patients	815	666
Total daily cost (including officers' salaries)	[illegible]	$2.64
Number of out patient	2127	2091
Number of times treated	3479	3568

Maximum daily number of patients last two years was 72, Minimum 37.

(3) ADAPTABILITY OF PLANT.

The area is ample and the alterations and repairs recommended under Section III (detailed report of the station) will render it adaptable for present needs. Summary of the work and estimated cost will be found under Paragraph 4. Should expansion be demanded this can be met by the erection on the reservation of quarters for officers and attendants and the rearrangement of the interior of the building to conform with modern standards, as recommended under Section I, Paragraph 6, (detailed report of the station.)

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended:

General repairs and painting, (Appendix A)	$ 5,114.00
Remodeling rooms and changes therein (Appendix A)	1,885.00
Bedside call system, fire protection, and repairs to walks and entrances (Appendix A)	1,790.00
Mechanical and electrical equipment (Appendix B)	4,870.00
Administrative equipment (Appendix D)	6,234.00
Total.	$19,893.00

VINEYARD HAVEN, MASSACHUSETTS.

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(I) LOCATION AND HISTORY.

The reservation and buildings are located on an elevated plateau on the southeast side of the harbor at Vineyard Haven, Mass.

Reservation. Comprises about five acres.

Situation. Sanitary and suitable for hospital purposes.

Structures. Main hospital building, attendants' quarters, isolation hospital, unserviceable property and hose house.

Site. First occupied in 1879. On June 7th, 1892, additional land purchased. Buildings erected and occupied on December 30th, 1895. Cost of additional land $1,250.00. Cost of buildings $20,000.00. Total initial cost $21,250.00

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity-Normal 27, Maximum 35.
Floor area per patient based on normal capacity, 77 square feet.
Air space " " " " " " 900 cubic feet.

Fiscal years.	1909	1914.
Average daily number of patients	10	12
Number of hospital patients	83	93
Total daily cost		$3.08
Number of out patients	172	182
Number of times treated	164	220

(3) ADAPTABILITY OF PLANT.

The area is ample and the additions and minor alterations to the buildings recommended under Section III (detailed report of the station) will render it adaptable for present needs. Summary of the work and cost will be found under Paragraph 4.

Should expansion be demanded this can be accomplished by extending the wards of the main building, thereby doubling the capacity of the present structure.

(4) RECOMMENDATIONS.

The following alterations, repairs and equipment are recommended:

General repairs and alterations (Appendix A)	$1,100.00.
Mechanical & Electrical equipment (Appendix B)	85.00.
New Construction (Appendix C)	4,000.00.
Administrative Equipment, (Appendix D)	2,257.00.
Total.	$7,442.00.

NEW YORK, N. Y. STAPLETON, S. I.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located on Bay Street, Stapleton, S. I. and faces New York Harbor.

Reservation. Comprises 9,755 acres.

Situation. Sanitary and desirable for hospital purposes.

Structures. Main hospital building, surgeon's quarters, junior medical officers quarters, barn and attendants' quarters, gate lodge, tool shed, and necropsy house.

Site & Buildings. Purchased from the Marine Society of New York in May 1903. Cost, $250,000.00. Buildings remodeled in 1914. Cost $249,953.42.

(2) CAPACITY & RELIEF AFFORDED.

Bed Capacity - Normal 158, Maximum 208.
Floor area per patient based on normal capacity 90 to 110 square feet.
Air space " " " " " " 1100 to 1800 cubic "

	Fiscal years. 1909	1914.
Average daily number of patients	112	83
Number of hospital patients	2241	2357
Total daily cost	----	$1.61
Number of out patients	2589	2703
Number of times treated.	4904	4353

Maximum daily numberof patients last 5 years was 142.

(3) ADAPTABILITY OF PLANT.

The area is sufficient and the alterations and addition to the buildings recommended under Section III (detailed report of the Station) will render it adaptable for all present needs. Summary of the work and cost will be found under Paragraph 4.

Should expansion be demanded, extensions to the main building or erection of new buildings would be necessary to provide increased facilities for ward and executive purposes.

(4) RECOMMENDATIONS.

The following immediate repairs, alterations and equipment are recommended:

General repairs and alterations (Appendix A)	$ 9,525.00
Grading and improving grounds and inclosures (Appendix A)	10,000.00
Mechanical and electrical equipment (Appendix B)	8,050.00
New Construction, surgeon's house, laundry, barn and isolation hospital (Appendix C)	29,000.00
Administrative equipment (Appendix D)	49,845.00
Total	$106,420.00

BALTIMORE, MARYLAND.

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(I) LOCATION AND HISTORY.

The reservation and buildings are located on Remington avenue near Wyman Park in Baltimore, Maryland.

Reservation. Comprises 6 acres.

Situation. Excellent and suitable for hospital purposes.

Structures. Executive building, surgeon's house, three ward buildings, attendants' quarters, boiler house, laundry, barn, and six tent houses.

Site. Purchased in 1882. Cost $20,000.00. Buildings completed March 21, 1887. Cost $80,000.00. $23,000.00 expended on approaches in 1886, and $2,500.00 on surgical dressing rooms in 1913. Total sum $125,500.00.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity - normal 99. Maximum, 122.
Floor area per patient based on normal capacity, 108 square feet.
Air space * * * * * * 1700 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	60	67
Number of hospital patients	569	691
Total daily cost.	----	$2.22
Number of out patients.	1304	1914
Number of times treated	2509	2596

Maximum daily number of patients last 3 years was 99. Minimum 40.

(3) ADAPTABILITY OF PLANT.

The area is ample. The present plant is of the old pavilion type and unsuited to modern hospital requirements. A new plant of 125 bed capacity should be constructed on the present site to replace existing buildings.

The minor repairs to existing structures recommended under Section III (detailed report of the station) should however be carried out pending the construction of a new hospital.

(4) RECOMMENDATIONS.

Repairs and alterations	(Appendix A)	$ 3,660.00
Mechanical equipment,	(Appendix B)	5,400.00
New construction,	(Appendix C)	375,000.00
Administrative equipment,	(Appendix D)	2,022.00
Total		$386,082.00

WILMINGTON, NORTH CAROLINA.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located on Eighth and Ann Sts., Wilmington, N. C.

Reservation. Comprises 18½ acres.

Situation. Favorable and suitable for hospital purposes.

Structures. Old hospital, new hospital, isolation hospital, laundry, and carpenter shop, stable, coal shed and hydrant, and hose house.

Site. Land purchased in 1858. Building completed in 1860. Cost including land $42,897.94. Hospital repaired in 1881. Cost $6,000.00. A new ward building, isolation house and laundry were added in 1895, cost $8,400.00. Total $57,297.94.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity - Normal, 17 Maximum 19.

Floor area per patient based on normal capacity 75 square feet.
Air space " " " " " " 790 to 1180 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients.	5	6
Number of hospital patients	93	149
Total daily cost.	----	$6.52
Number of out patients	329	419
Number of times treated	488	530

Maximum daily number of patients last 9 years was 30. Minimum none.

(3) ADAPTABILITY OF PLANT.

The area is ample and the alterations and repairs to the buildings recommended under Section III (detailed report of the station) will render it adaptable for present needs. Summary of work and cost will be found under Paragraph 4.

Should expansion be demanded there is ample space for additional buildings or erection of new ones.

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended:

Rearrangement of toilet rooms in ward building and minor repairs, (Appendix A)	$1,055.00.
Mechanical and electrical equipment (Appendix B)	800.00.
Administrative equipment (Appendix D)	5,344.00.
Total	$7,199.00.

SAVANNAH, GEORGIA.
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(1) LOCATION AND HISTORY.

The reservation and hospital buildings are located on York Street Savannah, Ga.

Reservation. Comprises 6/10 of one acre.

Situation. Fair but area is limited for hospital purposes.

Structures. One building, the hospital.

Site. Transferred from the Post Office Department. Building completed and opened November 1st, 1906. Cost $96,720.00. Total cost $125,000.00

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity - normal 42. Maximum 48.
Floor area per patient on normal capacity 63 to 90 square feet.
Air space " " " " " 870 to 1140 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients.	14	38
Number of hospital patients	367	377
Total daily cost.	----	$2.42
Number of out patients.	583	853
Number of times treated	921	1116

Maximum daily number of patients last 4 years 44, minimum 14.

(3) ADAPTABILITY OF PLANT.

The area is limited (6/10 of an acre) The present building is too small for the amount of work performed. The repairs and alterations recommended under Section III (detailed report of the station) would increase its adaptability.

Additional capacity should be provided by the erection of a new building adjoining the present structure.

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended:

Minor repairs and improvements (APPENDIX A)	$ 1,750.00
Mechanical and electrical equipment(Appendix B)	252.00
New construction, addition to hospital (Appendix C)	50,000.00
Administrative equipment. (Appendix D)	2,910.00
Total	$54,912.00

KEY WEST, FLORIDA.
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(1) LOCATION AND HISTORY.

The reservation and buildings are located in the western end of Key West, Florida, between the Army and Navy Reservations.

Reservation. Comprises 1½ acres.

Situation. Good and desirable for hospital purposes.

Structures. Main hospital. Pharmacist's quarters, laundry and attendants' quarters, storehouse, carpenter shop, and attendants' quarters.

Site. Appropriation made by Congress in 1844 for the erection of hospital. Records available do not show whether site

was included in this appropriation or if the land was part of the Army or Navy Reservation.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity - normal, 22. Maximum 24.
Floor area per patient based on normal capacity 84 square feet.
Air space " " " " " " 630 to 980 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	7	7
Number of hospital patients	57	105
Total daily cost	---	$5.30
Number of out patients	214	286
Number of times treated	254	407

Maximum daily number of patients last 10 years was 20, minimum 2.

(3) ADAPTABILITY OF PLANT.

The area is limited (1½ acres) The repairs, alterations and equipment recommended under Section III (detailed report of the station) will increase its adaptability. Summary of the work and cost will be found under Paragraph 4.

An appropriation of $40,000.00 is now available for erection of a surgeon's house, attendants' quarters, storehouse and laundry, necropsy building and repairs to breakwater. When these are completed the station will be adaptable for all present and prospective future needs.

(4) RECOMMENDATIONS.

Repairs, alterations and intercommunicating telephone system (Appendix A)	$1,330.00
Mechanical equipment (Appendix B)	600.00
New construction, out houses for isolation (appendix C)	500.00
Administrative equipment, (Appendix D)	635.00
Total.	$3,065.00

MOBILE, ALABAMA.
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(1) LOCATION AND HISTORY.

The reservation and buildings are located on St. Anthony and Jefferson Sts., in Mobile, Alabama.

Reservation. Comprises 3-3/10 acres.

Situation. Sanitary and suitable for hospital purposes.

Structures. Hospital, laundry, carpenter shop, barn, necropsy, paint house, disinfecting house, isolation hospital and storehouse.

Site. Site and building purchased from the City of Mobile in 1841. Cost not known. Expended on buildings on land up to 1900, $63,820.00

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, normal 34. Maximum 38.
Floor area per patient based on normal capacity 82 square feet.
Air space " " " " " 970 cubic feet.

	Fiscal years. 1909	1914.
Average daily number of patients.	21	23
Number of hospital patients.	433	357
Total daily cost	---	$8.36
Number of out patients	841	436
Number of times treated	1210	835

Maximum daily number of patients last 10 years was 42. Minimum 8.

(3) ADAPTABILITY OF PLANT.

The area is ample and the alterations and repairs to the building recommended under Section III (detailed report of the station) will render it adaptable for some time to come. Summary of the work and cost will be found under Paragraph 4. Should further expansion be demanded this can be met by the erection of a new building on the rear of the present site.

(4) RECOMMENDATIONS.

General repairs. (Appendix A)	$ 150.00
New construction, remodeling building and improvements, (Appendix C)	60,500.00
Administrative equipment, (Appendix D)	1,818.00
Total.	$62,468.--

NEW ORLEANS, LOUISIANA.
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(1) LOCATION AND HISTORY.

The reservation and buildings are located on the east bank of the Mississippi River on Tchoupitoulas, Henry Clay Avenue and State Streets in New Orleans, Louisiana.

Reservation. Comprises 23 acres.

Situation. Sanitary and suitable for hospital purposes.

Structures. Executive building, surgeon's, P. A. Surgeon's quarters, kitchen and attendants' quarters, three ward buildings, laundry and power house, disinfecting and paint shop, carpenter shop, attendants' quarters, macropay building, stable, and gate lodge.

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(2) [illegible]

[illegible]

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[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

[illegible]

(3) [illegible]

[illegible]

(4) [illegible]

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[illegible]	[illegible]	[illegible]
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[illegible]		

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(5) [illegible]

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[illegible]

[illegible]

[illegible]

Site. Purchased in 1882. Site and buildings cost $100,000.00 Hospital opened on April 21st, 1885. Additional buildings and improvements up to March 4th, 1907, $52,300.00 Total, $152,300.00.

(2) **CAPACITY AND RELIEF AFFORDED.**

Bed capacity, normal, 61, Maximum 74.
Floor area per patient based on normal capacity 100 square feet.
Air space " " " " " " 1700 cubic feet.

	Fiscal years 1909	1914
Average daily number of patients	35	41
Number of hospital patients	431	457
Total daily cost	---	$2.31
Number of out patients	1343	1262
Number of times treated.	1841	2386

Maximum daily number of patients last 8 years 67, minimum 19.

(3) **ADAPTABILITY OF PLANT.**

The area is ample but the plant is old and in poor structural condition. Extensive repairs and rehabilitation not justified. A new hospital is needed. The repairs and alterations to the building recommended under Section III (detailed report of the station) should however, be authorised to keep the present plant in a serviceable condition until a new hospital of 100 bed capacity can be secured. Summary of the work will be found under Paragraph 4.

(4) **RECOMMENDATIONS.**

Repairs and alterations (Appendix A)	$ 5,075.00
Mechanical equipment (Appendix B)	7,355.00
New construction, toilets for attendants (Appendix C)	1,200.00
" " tent houses for isolation purposes (appendix C)	1,000.00
" " new hospital (100 beds) " "	350,000.00
Administrative equipment (Appendix D)	5,441.00
Total.	$369,971.00

Great Lakes.

(11)	Buffalo, N. Y.	(13)	Detroit, Mich.
(12)	Cleveland, Ohio.	(14)	Chicago, Ill.

BUFFALO, NEW YORK.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located on Main Street, Buffalo, N. Y., between the Providence Retreat and the Deaf and Dumb Institute.

Reservation. Comprises 3½ acres.

Situation. Excellent and well suited for hospital purposes.

Structures. One main hospital building.

Site. Purchased in 1902. Cost $22,000.00. Buildings completed and occupied on September 1st, 1909. Cost $103,000.00. Total land and buildings, $125,000.00.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, normal 40, maximum 46.
Floor area per patient, based on normal capacity 83 to 99 square feet.
Air space " " " " " " 790 to 1260 cubic feet.

	Fiscal years 1909	1914
Average daily number of patients.	17	22
Number of hospital patients	347	349
Total daily cost.	---	$2.60
Number of out patients	1424	1608
Number of times treated.	2087	2532

Maximum daily number of patients last 2 years 45, minimum 8.

(3) ADAPTABILITY OF PLANT.

The area is sufficient and the building with the repairs and alterations recommended under Section III (detailed report of station can be made adaptable for present needs. Summary of the work and cost will be found under Paragraph 4.

(4) RECOMMENDATIONS.

The following repairs, alterations, and equipment are recommended.

Repairs and alterations to building and grounds (Appendix A)	$ 3,075.00
Mechanical equipment (Appendix B)	1,000.00
New construction, isolation building &coal house, (Appendix C)	5,600.00
Administrative equipment. (Appendix D)	3,312.00
Total	$ 12,912.00

CLEVELAND, OHIO.

* * * * * * * *

(1) LOCATION AND HISTORY.

The reservation and buildings are located on Lakeside Avenue, near the Lake Erie water front in Cleveland, Ohio.

Reservation. Comprises 8.57 acres. Fill on water front now going on will probably increase this by 15 acres making a total of 23½ acres.

Situation. Not desirable for hospital purposes on account of smoke and noise.

Structures. Main hospital, ward and laundry building, sterilizing and storage building, power and heating plant, isolation house, necropsy house and pharmacist's quarters.

Site. Selected in 1843. Cost $12,000.00. Hospital completed in November 1852, cost $87,702.66. Total cost $119,291.84.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, normal 63, maximum 72.
Floor area per patient based on normal capacity 84 to 100 square feet.
Air space " " " " " " 1020 to 1280 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	41	28
Number of hospital patients	494	433
Total daily cost.	----	$2.24
Number of out patients	1270	1575
Number of times treated	2188	2921

Maximum daily number of patients last 6 years, 59, minimum 18.

(3) ADAPTABILITY OF PLANT.

The buildings are very old, structurally bad, and impossible of re-arrangement to meet the demands of modern hospital practice.

The site is so menaced, by smoke and noise from the railroads, and the land is so valuable, for commercial purposes, (estimated at $1,800,000.00) as to make it most undesirable as a location for a hospital plant.

It is recommended that the present plant be sold, that a modern hospital of 100 bed capacity be erected in a more desirable locality and that the proceeds from the sale of this property be utilized for the erection of the new plant and the improvement of other hospitals of of the Public Health Service.

(4) RECOMMENDATIONS.

If the hospital is retained in its present location the following repairs, alterations and equipment are recommended:

Repairs and alterations (Appendix A)	$1,225.00
Mechanical and electrical equipment (Appendix B)	1,900.00
Administrative equipment (Appendix D)	1,603.00
Total	$4,728.00
New construction, new hospital on new site.	$500,000.00

DETROIT, MICHIGAN.

* * * * * * * * *

(1) LOCATION AND HISTORY.

The reservation and buildings are located on Jefferson and Mount Elliot Streets, Detroit, Michigan.

Reservation. Comprises four acres.

Situation. Sanitary and desirable but somewhat smoky.

Structures. Main hospital, surgeon's house, boiler house, bathhouse, laundry, isolation house, barn and carriage house, green house, morgue building, and fuel storage house.

Site. Ceded by the state of Michigan to the United States in 1853. Cost $23,000.00. Buildings cost about $126,000.00. Total cost $149,000.00

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, normal 41, maximum 46.
Floor area per patient based on normal capacity 70 square feet.
Air space " " " " " " 900 cubic feet.

Fiscal years.	1909	1914.
Average daily number of patients	22	30
Number of hospital patients	542	454
Total daily cost	----	$2.06
Number of out patients	1097	1197
Number of times treated	3458	2987

Maximum daily number of patients for past 10 years 50.

(3) ADAPTABILITY OF PLANT.

The area is ample and the alterations and repairs recommended under Section III (detailed report of station) will render the station adaptable for present needs. Summary of the work and cost will be found under Paragraph 4.

Should expansion be necessary the areaof the reservation is sufficient for the erection of new buildings.

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended:

Repairs and alterations (Appendix A)	$2,250.00
Mechanical and electrical equipment (Appendix B)	2,280.00
New construction, attendants quarters, (Appendix C)	12,000.00
Administrative equipment, (Appendix D)	3,992.00
Total.	$20,522.00

CHICAGO, ILLINOIS.

* * * * * * * * *

(1) LOCATION AND HISTORY.

The reservation and buildings are located on Clarendon Avenue in Lakeview.

Reservation. Comprises 13 acres.

Situation. Sanitary and very desirable for hospital purposes.

Structures. Main hospital, boiler house, laundry, stable and isolation hospital grouped under one building.

Site. Purchased in 1867. Cost unknown. Buildings commenced in 1867. Completed November 17, 1873. Cost. $422,107.03.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity. normal 96. Maximum 111.
Floor area per patient based on normal capacity 80 to 88 square feet.
Air space per patient based on normal capacity 1150 to 1350 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	52	66
Number of hospital patients	504	726
Total daily cost.	----	$3.94
Number of out patients	1720	1339
Number of times treated.	2154	2436

Maximum daily number of patients last few years, was 103.

(3) ADAPTABILITY OF PLANT.

The area is ample and the alterations and additions to the buildings recommended under Section III (detailed report of the station) will render it adaptable for present needs. Summary of the work and cost will be found under Paragraph 4.

Should expansion be demanded this can be met by the erection on the reservation of quarters for officers and attendants and the rearrangement of the interior of the hospital building for increased ward and executive purposes.

(4) **RECOMMENDATIONS.**

The following repairs, alterations and equipment are recommended:

General repairs and alterations (Appendix A)	$ 4,210.00
Mechanical and electrical equipment (Appendix B)	720.00
New construction, sea wall and breakwater (Appendix C)	40,000.00
Administrative equipment (Appendix D)	4,757.00
Total.	$49,687.00

Mississippi and Ohio Rivers.

(15)	Ste Louis, Mo.	(18)	Evansville, Ind.
(16)	Cairo, Ill.	(19)	Louisville, Ky.
(17)	Memphis, Tenn.	(20)	Cincinnati, Ohio.
		(21)	Pittsburgh, Pa.

ST. LOUIS, MISSOURI.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located on Marine Avenue in the southern part of the City of St. Louis, Missouri.

Reservation. Comprises about 13 acres.

Situation. Not very desirable. Encroachment of manufacturing and other interests has diminished its value for hospital purposes.

Structures. Old hospital. Pavilion group consisting of executive building, 8 wards, heating plant and laundry, necropsy building, isolation hospital, wagon scale house and hose reel house.

Site. Purchased in 1842. Cost $7,468. Old hospital completed in August 1, 1855. Cost about $86,288.00. Pavilion hospital completed on February 15th, 1 82. Cost $33,700.70.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity Normal 73. maximum 90.
Floor area per patient based on normal capacity 120 to 130 square feet.
Air space " " " " " " 2,000 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	25	23
Number of hospital patients	553	516
Total daily cost	---	$3.39
Number of out patients	582	662
Number of times treated	771	978

Maximum daily number of patients last year was 29, minimum 13.

(3) ADAPTABILITY OF PLANT.

The present plant is inadequate. The buildings, of the pavilion type, are old and in bad repair. The site, owing to the encroachment of manufacturing and other interests is poorly adapted for hospital purposes. It is not deemed advantageous to the government's interests to expend any money on this plant for permanent improvements looking to a continuation of the existing layout.

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended:

General repairs and alterations (Appendix A)	$ 8,135.00
Mechanical and electrical equipment (Appendix B)	1,550.00
New site and new construction (Appendix C)	401,000.00
Administrative equipment, (Appendix D)	3,153.00
Total.	$413,838.00

CAIRO, ILLINOIS.

* * * * * * * *

(1) LOCATION AND HISTORY.

The reservation and buildings are located on Cedar Street between 10th and 12th Streets in Cairo, Illinois.

Reservation. Comprises 4½ acres.

Situation. Good and suitable for hospital purposes.

Structures. Executive building, surgeon's house, two hospital wards, attendants' quarters, laundry, barn and necropsy building and disinfecting house.

Site. Purchased in 1882. Cost $1,150.00. Hospital completed and opened on March 1, 1886. Cost $89,856.00

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, normal, 32. Maximum 42.
Floor area per patient based on normal capacity 120 square feet.
Air space " " " " " " 1850 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	14	6
Number of hospital patients	273	129
Total daily cost.	---	$6.41
Number of out paitents	417	523
Number of times treated	532	627

Maximum daily number of patients 10 years was 27, minimum 2.

(3) ADAPTABILITY OF PLANT.

The area and buildings are more than sufficient for the diminished needs of the station. It is recommended that the hospital be closed. The repairs recommended under Section III (detailed report of the station) should not be made if station is closed. Summary of the work and cost will be found under Paragraph 4.

(4) RECOMMENDATIONS.

The following repairs and equipment are recommended.

Repairs, (appendix A)	$ 50.00
Mechanical and electrical equipment (appendix B)	100.00
Administrative equipment (not needed if property is sold). (appendix D)	2,686.00
Total.	$2,836.00

MEMPHIS, TENNESSEE.
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(1) LOCATION AND HISTORY.

The reservation and buildings are located on a bluff on the east side of the Mississippi River, between Armstrong, California and Illinois Streets in Memphis, Tennessee.

Reservation. Comprises about 4½ acres.

Situation. High and sanitary. Too far from shipping interests.

Structures. Executive building, surgeon's quarters, attendants' quarters and laundry, two hospital wards, stable and necropsy building and carpenter shop.

Site. Purchased in 1881. Cost $4,725.00. Hospital completed and opened on March 31st, 1884. Cost $71,775.00. Total cost $76,500.00.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity normal 35. Maximum 45.
Floor area per patient based on normal capacity, 150 square feet.
Air space " " " " " " 2300 cubic feet.

	Fiscal years. 1909	1914
Average number of patients	20	13
Number of hospital patients	737	299
Total daily cost.	---	$4.31
Number of out patients	1523	1059
Number of times treated	2064	1559

Maximum daily number of patients last 5 years was 38, minimum 5.

(3) ADAPTABILITY OF PLANT.

The present pavilion hospital is old and in bad repair. Its location is undesirable being too far from the shipping district and not in a good section of the city. With hospitals at St. Louis and New Orleans a marine hospital is not needed at Memphis. It is recommended that the hospital be closed. If the buildings are continued in use the re-

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pairs and equipment recommended under Section III (detailed report of the station) should be authorized.

(4) RECOMMENDATIONS IF HOSPITAL IS CONTINUED IN USE.

General repairs and alterations (Appendix A)	$2,535.00
Mechanical and electrical equipment, (Appendix B)	50.00
Administrative equipment, (Appendix D)	2,281.00
Total.	$4866.00

EVANSVILLE, INDIANA.
* * * * * * * *

(1) LOCATION AND HISTORY.

The reservation and buildings are located on Illinois and Franklin Streets in the western part of Evansville, Indiana.

Reservation. Comprises ten acres.

Situation. Sanitary and desirable for hospital purposes.

Structures. Pavilion Hospital. Consisting of executive building, surgeon's house, 2 wards, barn and necropsy building, filter and tank house, attendants' quarters, paint house and boiler house.

Site. Purchased in 1888. Cost $8,800.00. Buildings completed and opened on January 25, 1892. Cost $91,200.00. Retaining wall $600.00. Total $106,000.00

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity Normal, 40, Maximum 50.
Floor area per patient, based on normal capacity, 120 square feet.
Air space " " " " " " 1900 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	9	13
Number of hospital patients	232	309
Total daily cost	---	$3.27
Number of out patients	318	462
Number of times treated	445	649

Maximum daily number of patients last 4 years was 25. Minimum 4.

(3) ADAPTABILITY OF PLANT.

The present plant is an old wooden hospital of the pavilion type. It is in bad repair and the expenditures necessary to modernize it are not justifiable. A new building of permanent type with a capacity of 75 beds should be erected on the present site and made a base or receiving hospital for the traffic on the Ohio and tributary rivers.

(4) RECOMMENDATIONS.

The following repairs, alterations and equipment are recommended, pending the erection and equipment of a new hospital.

General repairs and alterations (Appendix A)	$ 1,550.00
Mechanical equipment, (Appendix B)	105.00
New construction, new hospital, (Appendix C)	250,000.00
New construction, new surgical dressing room (Appendix C)	1,500.00
Administrative equipment (Appendix D)	2,746.00
Total.	$255,901.00

LOUISVILLE, KENTUCKY.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located on Portland Avenue in the northwest part of Louisville, Kentucky.

Reservation. Comprises eight acres.

Situation. Sanitary. Too far from center of shipping interests.

Structures. Main hospital, laundry, barn and necropsy, tool house, hot house.

Site. Purchased in 1842. Cost $6,000.00. Hospital opened by United States in 1847. Cost of buildings and grounds up to 1905, $82,200.33.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity normal, 34. Maximum 39.
Floor area per patient based on normal capacity, 100 square feet.
Air space " " " " " " 1130 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	19	16
Number of hospital patients	314	232
Total daily cost.	---	$2.89
Number of out patients	676	486
Number of times treated	1255	956

Maximum daily number of patients last 20 years was 35. Minimum 6.

(3) ADAPTABILITY OF PLANT.

The area is sufficient. The buildings are old and in bad repair and the location is undesirable on account of surroundings and distance from shipping interests. With a base hospital at Evansville a marine hospital at Louisville is not needed. It is recommended that the station be closed as a hospital but retained for public health work. Should

the station be retained the repairs, alterations and equipment recommended under Section III (detailed report of station) should be authorized. Summary of the work will be found under Paragraph 4.

(4) RECOMMENDATIONS.

General repairs and alterations (Appendix A)	$3,560.00
Mechanical and electrical equipment (Appendix B)	310.00
Administrative equipment (Appendix D)	1,010.00
Total.	$4,880.00

CINCINNATI, OHIO.
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LOCATION AND HISTORY.

The old hospital reservation is located in the eastern part of the City of Cincinnati overlooking the Ohio River to the south. It consists of one and one-half acres and is bounded by East Third, Pearl and Kilgore Streets. The buildings consist of two 2 story pavilion wards, executive building, surgeon's house, stable and carriage house, and old gate lodge. The wards and surgeon's quarters are of wood above the basement and the other buildings are of brick.

The buildings were abandoned in 1906 and since that time have fallen into bad repair. Since 1913 the executive building has been used as headquarters for the investigation of the pollution of the Ohio River and tributaries.

RECOMMENDATIONS.

It is recommended that the plant remain closed as a hospital but that it be devoted to the Public Service investigation work as at present. The wards and surgeon's house should be razed, and the executive building, dispensary and stable buildings repaired and the grounds placed in proper condition. It is estimated that this work will cost approximately $20,000.00.

PITTSBURGH, PENNSYLVANIA.
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(1) LOCATION AND HISTORY.

The reservation and buildings are located on part of the arsenal reservation in East Liberty between 40th and 41st Streets on Penn Avenue.

Reservation. Comprises about five acres.

Situation. Sanitary and desirable, and has less coal soot than the city proper.

Structures. Main hospital, storehouse, and old brick building.

Site. Transferred from War Department. Buildings erected and occupied October 22nd, 1910. Cost $125,000.00.

(2) CAPACITY AND RELIEF AFFORDED. 2

Bed capacity - Normal 40, maximum 46.
Floor area per patient, based on normal capacity, 83 to 99 square feet.
Air space " " " " " " 790 to 1260 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	7	6
Number of hospital patients	156	143
Total daily cost.	----	$5.02
Number of out patients	572	448
Number of times treated	858	738

Maximum daily number of patients last 5 years 24, minimum 1.

(3) ADAPTABILITY OF PLANT.

The area is ample and the buildings adaptable for present and future needs.

The station should be closed as a hospital as the service now being performed and the prospective demands in the near future do not warrant the expense incident to the operation. The building would be suitable as a home for Public Health work and should be retained.

If the station is kept open the minor repairs and administrative equipment recommended under Section III (detailed report of station) would be required.

(4) RECOMMENDATIONS.

Minor repairs to range, elevator and dark room (Appendix A)	$ 170.00
Administrative equipment (Appendix B)	2,467.00
Total.	$2,637.00

Pacific Coast and Miscellaneous.

(22) Port Townsend, Wash. (23) San Francisco, Cal.

(24) Fort Stanton, N. M.

PORT TOWNSEND, WASHINGTON.

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(1) LOCATION AND HISTORY.

The reservations and buildings are located on Quincy, Madison and Franklin Streets, Port Townsend, Washington.

Reservation. Comprises 2½ acres.

Situation. Elevated, sanitary and well suited for hospital purposes.

Structures. Main hospital building, barn and fumigating house.

Site. Land and buildings purchased in 1882. Cost $18,000.00. Old buildings destroyed by fire in 1893. New hospital completed and occupied on January 29th, 1896. Cost $20,000.00.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, Normal 65, maximum 83.
Floor area per patient, based on normal capacity, 95 square feet.
Air space " " " " " " 1700 to 1800 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	43	45
Number of hospital patients	879	773
Total daily cost.	---	$1.13
Number of out patients	177	84
Number of times treated	450	170

Maximum daily number of patients last 7 years, 61, minimum 19.

(3) ADAPTABILITY OF PLANT.

The area is ample and the repairs, alterations and additions to the buildings, recommended under Section III (detailed report of the station) will render it adaptable for all present needs. Summary of which will be found under paragraph 4. Should expansion be necessary this can be met by adding another wing to the present building.

(4) RECOMMENDATIONS.

Repairs, alterations and additions (Appendix A)	$ 3,950.00
Mechanical equipment, (Appendix B)	5,450.00
New construction, tent houses for isolation (Appendix C)	750.00
Administrative Equipment (Appendix D)	6,393.00
Total.	$16,543.00

3

SAN FRANCISCO, CALIFORNIA.

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(1) LOCATION AND HISTORY.

The reservation and buildings are located at the southwestern part of the U. S. Army reservation known as the Presidio, near Lake Street, San Francisco, California.

Reservation. Comprises 86 acres.

Situation. Excellent and suitable for hospital purposes.

Structures. Surgeon's residence, old and new, Assistant Surgeon's quarters, executive building, hospital dining room and kitchen, blacksmith shop and necropsy, attendants' quarters, old and new, wards A B C & D, isolation ward, assistant pharmacists' and clerks' quarters, steam sterilizing building, boiler house and laundry, stable, pump house, greenhouse, tool house, and fire hose shed.

Site. Transferred from War Department in 1873. Buildings completed and occupied in June, 1875. Cost $73,884.06. Up to March, 1905, $72,200.00 have been expended. Total $146,084.06.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, normal 130, maximum 150.
Floor area per patient, based on normal capacity 100 square feet.
Air space " " " " " " 1600 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	142	88
Number of hospital patients	1378	1276
Total daily cost.	----	$1.53
Number of out patients	1539	1797
Number of times treated	3672	4130

Maximum daily number of patients last 5 years, 190, minimum 45.

(3) ADAPTABILITY OF PLANT.

The area is ample. The present plant is an old wooden hospital of the pavilion type. It is in bad repair and the expenditures necessary to modernize it are not justifiable. A new plant of permanent type with a capacity of 200 beds should be erected on the present site. The alterations and repairs to the buildings recommended under Section III (detailed report of the station) should however be carried out pending the construction of the new plant. Summary of the work and cost will be found under Paragraph 4.

(4) RECOMMENDATIONS.

General repairs and alterations	(Appendix A.)	$ 2,415.00
Mechanical equipment	(Appendix B)	4,385.00
New construction, necropsy building, attendants' quarters operating suite and isolation	(Appendix C)	27,700.00
Administrative equipment	(Appendix D)	1,571.00
	Total,	$36,071.00

New modern Hospital (Appendix C) $600,000.00

SANITARIUM FOR TUBERCULOSIS, FORT STANTON, NEW MEXICO.

(1) LOCATION AND HISTORY.

The reservation and buildings are located on the Bonito River in Lincoln County, New Mexico, six miles from Capitan and twenty-one miles from Carrizoso, New Mexico.

Reservation. Comprises about 43 square miles.

Situation. Too isolated; water supply inadequate; altitude (6230 ft.) too great; transportation expensive. Not well suited for treatment of tuberculosis cases.

Structures. There are 23 buildings and 93 tent houses. See section III Paragraph 1 (detailed report of the station.)

Site. Transferred by executive order from the Interior Department, on April 1st, 1899. Area increased from 16 to 43 square miles by executive order on November 1st, 1899. Station opened for reception of patients on November 18, 1899. Cost not available.

(2) CAPACITY AND RELIEF AFFORDED.

Bed capacity, Normal, 250. Maximum 265.
Floor area per patient, based on normal capacity, 110 square feet.
Air space " " " " " " 1500 cubic feet.

	Fiscal years. 1909	1914
Average daily number of patients	225	185
Number of hospital patients	399	328
Total daily cost	---	$1.77

Maximum daily number of patients 10 years 260, minimum 144.

(3) ADAPTABILITY OF PLANT.

The area is more than ample, but the altitude (6230 ft), poor water supply, hospital accommodations and inaccessibility render it unadaptable as a tuberculosis sanitarium.

It is recommended that the station be disposed of and that a sanitorium be established at a lower level in a more desirable locality. Consideration might well be given to a single institution for the Army, Navy and Public Health Service.

A location on one of the higher plateaus of North or South Carolina or Georgia (with water, fuel and transportation facilities) for the eastern and middle states and a smaller institution of like character located in a desirable position on the Pacific Coast is suggested.

The repairs, alterations and additions to the plant recommended under Section III (detailed report of the station) should however, be made to render the plant adaptable until the recommendations made under Section I, Paragraphs 3 and 4 can be carried out. Summary of work and cost will be found under Paragraph 4 of this report.

(4) RECOMMENDATIONS.

General repairs and alterations (Appendix A)	$ 4,025.00
Mechanical equipment (Appendix B)	2,000.00
New construction, storehouse, slaughter house, hog pens and blacksmith shop (Appendix C)	5,800.00
New construction, attendants' quarters (Appendix C) not recommended if station location is to be changed.	10,000.00
Administrative equipment. (Appendix D)	6,040.00
Total	$27,865.00

TOTAL ESTIMATED COST OF WORK RECOMMENDED.
* *

The total estimated cost of all work recommended at all of the 24 Marine Hospitals is as follows:

Repairs, Appendix A.	$ 107,500.00
Repairs, Appendix B.	51,500.00
New construction, Appendix C.	2,740,000.00
Administrative equipment, Appendix D.	123,000.00
Total.	$3,023,000.00

It is estimated that $1,800,000.00 would be derived from the sale of the property at Cleveland, Ohio.

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September 29, 1914.

Senior Surgeon B. A. Carmichael,
U.S. Public Health Service,
Washington, D.C.

Sir:

You, having been appointed Chairman of a Board of three to inspect Marine Hospitals and Quarantine Stations throughout the country, the following observations are transmitted to you for the guidance of the Board.

1....It is desired that at the first available point the Board call on Surgeon A. W. Dunbar, of the Surgeon General's office, U.S.N., and discuss with him matters in regard to the construction of naval hospitals, etc.; Dr. Dunbar is particularly well informed along these lines, and will be able to give the Board many practical suggestions and such useful information.

2....It is suggested that the Board prepare blank forms requesting information under the various headings indicated, in such convenient form that the officers in charge of the stations may supply the required information before the arrival of the Board, who can then check over the main items and complete any data that may be lacking, and secure all further information desired with the least possible delay. These data sheets may then be attached to the notes regarding that station, and returned to the Office of the Supervising Architect for file, for the Board's future use in compiling their final report, which, of course, cannot well be made until all stations have been visited.

3....The photographs found in the data forwarded the Board in case of the Custodians should be supplemented by additional views, to be taken by the official photographer of post card size. Interior views of wards, kitchens, etc., are especially desired. All buildings, quarters, breakwaters, etc., in disrepair should be completely photographed. A complete photographic record of each station is desired, each photograph to be marked for identification. Each roll of films after all exposures are taken should be promptly

marked for identification and forwarded to the Supervising Architect for development. One print copy will be immediately prepared and held in the Office of the Supervising Architect pending the return of the Board.

4....In regard to the reports on Navy, State, Municipal or Private institutions, it is desired that any figures submitted, relative to their cost, be as accurate as possible. In preparing these figures care should be taken to include the cost of all articles used, whether donated to the hospital or purchased from its funds. The cost of all service should also be included, whether gratuitous or hired. The cost of the upkeep should be added to the above. These figures are necessary to make a complete comparison with hospitals where services are paid for by the Government.

5....In making recommendations relative to the closure of a station, same should not be based on the small amount of relief furnished to seamen, unless suitable accommodations can be obtained for the patients of the service at local hospitals at reasonable rates. A station should be kept open if it is required by the service for the study of diseases of men or public health problems.

6....The Board should consider whether each station is advantageously located in regard to the duties which it discharges.

7....Consider whether the site has so depreciated in value as to warrant its sale and the construction of a new station in a less expensive locality with the proceeds of the sale. In such an event an attempt should be made to obtain an approximate estimate of the amount which should be realized from the sale, or the Custodian should be requested to do this and forward the information to the Board in care of the Supervising Architect. The Marine Hospitals at Cleveland, Ohio, and Portland, Maine, cannot be sold or leased without authority from Congress, nor can any marine hospital be sold or leased without such authority when the extent of relief equals twenty patients per diem on an average for the last four years.

8....State whether the station as a whole constitutes a good layout for the purpose, regardless of the condition of the buildings or the extent of the present accommodations, the object being to ascertain whether there exists a good groundwork on which the station in future may be developed.

9....Consider whether, on the basis of the existing layout, it will pay to construct additional buildings as the needs of the station increase, bearing in mind the cost of administration; whether the layout, regardless of the condition of the buildings, is so unintelligent or obsolete as to justify complete or partial reconstruction; whether the hospital buildings are satisfactory as such from the point of view of modern hospital design, regardless of the physical condition of the structures; whether the existing buildings could be rendered more efficient by further expenditures, and the nature, direction and extent thereof; whether the existing buildings are in such a state of disrepair that further expenditures would be a waste of money, or if the wisest course would be to demolish and reconstruct them.

10...Consider the situation of the rooms used as dispensary, operating room, surgical dressing room, dining room, kitchen, and quarters for attendants, and decide if a rearrangement of any of these rooms is desirable. A room for the administration of anaesthetics, another for the preparation of dressings, and a washroom should be provided, if possible, connecting with the operating room.

11...Suggestions are desired regarding the quarters assigned for the use of officers, both as to location, adequacy or inadequacy, and state of repair; also whether same are or should be on the reservation, it being desirable that all medical officers, when practicable, live on reservations.

12...Special consideration should be given for providing accommodations for the treatment of patients suffering from tuberculosis, by sunlight and fresh air; such as sleeping porches, verandas facing the south, and open air wards.

13...As complete information as may be is desired relative to heating, lighting and fire protection apparatus; ....s as to what economies, if any, may be effected by the installation of central heating and lighting plants, water supply, etc., or by discontinuing the use of present plants and purchasing current, water or gas from local companies or municipalities.

14...Where recommendations are made involving the use of building materials, state the most economical materials to be used in each locality, bearing in mind materials adapted to local climate, the distance from sources of supply, the action of the elements, etc. This information will be particularly valuable for future use. Buildings in colder climate should be of masonry, while those in warmer climate may be of wood.

15...It is not desired to make changes at stations merely to meet the views of the officer who at present happens to be in charge, but only when the best interests of the Government service will be promoted thereby. In recommending changes in the buildings of a station the Board should consider the relief work done in previous years. This information can be obtained from the annual reports of the service. It should be remembered that Congress will probably in the next few years enact laws favoring the upbuilding of the merchant marine and recommendations, therefore, should have in view future extensions of the present or proposed buildings.

16...Note if the grounds are sufficient in extent to permit of enlarging the facilities at the station. If not, note whether it is possible to obtain more land or whether the situation is such that the station cannot be enlarged. Ask the Custodian to collect data concerning the cost of additional land if it would appear that much would be needed in the near future. (See #7).

17...Consider any administrative or other advantage which would follow if the maintenance and operation of the various stations are transferred from the Public Health Service to the Office of the Supervising Architect, so that the latter can maintain and operate these buildings as it at present takes care of Post Offices and other buildings under the control of the Treasury Department. The Supervising Architect now looks after the physical maintenance of marine hospitals and quarantine station structures, but has no control over the operating force, that is to say, the mechanics who take care of the buildings and grounds, engineers, janitors, etc. Neither does the Office of the Supervising Architect purchase supplies used in the care of the building, such as coal, gas, electricity, toilet paper, soaps, tools, etc., The Supervising Architect has had special experience in purchasing these supplies, and makes annual contracts for the same wherever possible, so that the Public Health Service would obtain the advantage of the lowest possible prices. If the engineering and other personnel are under the direction of the Supervising Architect, Inspectors in the employ of the Office of the latter will visit buildings, and ascertain whether fuel is being used economically, the boiler and generating plants properly handled, etc.

18...In making recommendations the Board should bear in mind that expensive and ornate buildings are not desired, nor structures larger than are required for present needs, and are suitable for the class of patients treated therein.

Dr. D.A.Carmichael, Sept. 29, 1914. -5- PUBLIC HEALTH SERVICE
- - - -

Dr. D. A. Carmichael, Sept. 18, 1914. -6- PUBLIC HEALTH REP.
- - - -

In this connection the erecting on the part of the Government of detention quarters should be based upon the statement whether detention quarters could be chartered in the port proper, in order to obviate the expense on the part of the Government of erecting barracks which perhaps may not be used for a year or two. This point is given some importance for the reason that occasions have presented where the members of the appropriations committee have wanted statements to the effect that, before detention barracks were erected at quarantine stations, all efforts were exhausted to hire temporary quarters in the port itself. Recently an appropriation was obtained for quarantine facilities at the port of Providence, and the statement that every means was exhausted to find temporary quarters in the port of Providence for the personnel of vessels was an important factor in granting the request for the appropriation.

Another point to be considered is whether the quarters occupied by the officer in charge or the pharmacist might not be used at certain stations to better purpose as detention barracks or hospitals, and the officer or the pharmacist, or both, be allowed to live in the city and board vessels from the city proper. Charleston, S.C., is an example of where it is thought that a point of this kind could be considered with advantage. On the other hand, a station located like the one on Angel Island, California, would of necessity require the constant residence of a medical officer and pharmacist. San Diego, California, is an example of a station where it is thought that, under certain conditions, the medical officer might live in the city proper, and his residence be used for detention purposes, rather than to make request of Congress for an appropriation for this purpose.

24...The Bureau of The Public Health Service will advise the officers in charge of the various stations in advance of a forthcoming visit of the Board, clearly informing such that the purpose of the visit is not to investigate the officer but to examine the station, with reference to its physical conditions and requirements, and request him to give all possible assistance in the discharge of their duties in securing full and complete data relative to the proper maintenance and upkeep of the station, especially regarding maintenance and administrative costs, urgent repairs, appliances, etc. He will be requested to have all data which might be useful to the Board in shape for convenient examination.

23....As soon as possible after visiting each station or private hospital, members of the Board should dictate complete notes thereon, while the matter is fresh in mind. These notes may be brief in character but should cover all phases of the situation, so that later on no difficulty will be met in compiling reports therefrom.

24...All data secured at each station, including the completed forms referred to, should be attached to the notes, and the whole properly labelled for identification, forwarded to the Supervising Architect (Room No. 4[illegible]), to be placed on file awaiting the return of the Board for its use in drafting its final report. Special data forwarded the Board in care of the Custodians should be promptly returned to the files of the Supervising Architect.

25...After the inspections are completed, the Board will return to Washington and draw up a general report, based on the data that has been forwarded from each station.

26...The final report should be prepared in such a manner that members of the House and Senate appropriation committees will be able to obtain complete information regarding the needs of each station.

27...A list of the appropriations made by Congress for the marine hospitals and quarantine stations will be given to the Board by the Supervising Architect, and it is desired that the Board submit a separate report, after the inspection of all the stations has been completed, with recommendations as to how this money may be efficiently spent.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE

EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

BALTIMORE, MARYLAND.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent
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Civil Engineer, U. S. N.

GENERAL INDEX

U. S. MARINE HOSPITAL, BALTIMORE, MD.

Report of inspection made April, 1915, with recommendations as to policy to be pursued.

I.

GENERAL CONSIDERATIONS.

(1) Location.

The marine hospital reservation at Baltimore, Md., is located in the northwestern part of the city, south of Wyman Park and northwest of Druid Hill Park. It comprises about six acres of land and is bounded on the north and east by Wyman Park Drive and on the west by adjoining property.

The reservation is quadrilateral in form and slopes to the westward with a marked depression in the northwest corner. It is terraced on the Remington Avenue side and along this side there is a substantial stone (marble) wall with an ornamental iron railing and on the other sides, stone walls, board and picket fences.

The grounds are well kept, well sodded and contain some fine trees and shrubs. The site is high, well drained, attractive in appearance and well suited for a hospital location.

The buildings are arranged in a pavilion group consisting of a central building, wards, quarters, kitchen, tent houses and accessory buildings for various purposes. The buildings are heated by steam, lighted by electricity and furnished with water from the city mains.

(2) History.

Previous to 1887 sick and disabled seamen at the port of Baltimore were cared for in the local hospitals at the expense of the Federal Government. On August 7, 1882, Congress granted an appropriation of $100,000.00 for the erection of a marine hospital at Baltimore. The site on which the property is now located was chosen by a board appointed for that purpose on January 11, 1884 and the sum of $20,000.00 paid for the land.

The erection of the buildings was commenced in 1886, and the hospital was completed and opened on March 21, 1887. Since that time it has been conducted by the Service.

(3) Need for a Marine Hospital.

Relief to sick and disabled seamen has been given at Baltimore since the early seventies and the growing maritime commerce of the port would seem to justify the continuance of such relief.

The number of patients admitted to hospital in 1909 was 569. In 1913—633 and 1914—691.

(4) Adequacy of Plant.

Although the bed capacity of the present hospital is sufficient to meet the maximum demands that have been put upon it, there is but little opportunity for expansion. The layout of the plant and character of the buildings are such as to make it impossible to provide the facilities demanded by modern hospital practice.

The present pavilion wards, erected in 1887, are of wood and are unsuited to the climate. They are also expensive in up-keep and administration, and do not lend themselves to alteration or extension required to provide modern facilities.

It is recommended that the present plant be superseded by a new modern hospital to be erected on the reservation, with a bed capacity for 125 patients and so designed as to be capable of economical expansion. The estimated cost of such a plant including hospital equipment is $375,000.00.

400 acres

(5) Acquisition or Disposal of Land.

The present reservation of six acres is well located for hospital purposes and is ample for all probable future needs of the station, but none of it should be disposed of.

(6) Future Development or Disposal of Plant.

A marine hospital station will, in all probability, always be required in this city. The new hospital plant, recommended under paragraph 4, will furnish all facilities required for many years to come. The new plant should be so designed that if the demands of the service require it, additional bed capacity can be provided by extensions without destroying the general Layout.

II

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings. (for details see appendix A)
Total estimated cost of work recommended, $3660.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended, 5400.00

(3) Legislative Appropriation for New Construction (for details see appendix C)
Total estimated cost of work recommended, 375000.00

(4) Appropriations for Administrative Equipment (for details see appendix D)
Total estimated cost of items recommended, 2022.00

TOTAL $386,082.00

(5) Personnel

The pay of the driver, two nurses and the laundryman should be increased to $40.00 per month each, making a total of $85.00.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

No. 1, Surgeon's Residence, a two story and basement wood frame building with a one story wing in rear with basement, slate roofs, 3¼ D & M floors, plastered walls and ceilings, standard base, window and door trim, painted, wood and plaster, clapboard exterior, painted. Condition fair. Steam heat. Gas and electric light. Floor area 4164 square feet.

No. 2, Administration Building, two story and basement, brick superstructure, rift pine floors first story except operating and toilet rooms which are porcelain tile. All other wood floors are 3¼ D & M pine, basement floors cement, plaster walls and ceilings above basement, standard base, window and door trim, wood and plaster painted. Minor repairs needed to second story floors. Wood frame, dining room and pantry built over rear veranda by station labor in 1909. Steam heat. Gas and electric light. Floor area 6,528 square feet.

No. 3, South Ward, one story wood frame on brick foundation, clapboard exterior, shingle roof, maple floors except toilet rooms which are marble cubes with marble wainscot 3' 0" high, elsewhere plaster walls. Open rafter in ward room, plaster ceilings in all other rooms, standard base, window and door trim painted. Steam heat. Gas and electric light. Floor area 4,636 square feet.

No. 4, Center Ward, wood frame on brick foundation, with one basement room only, used as a carpenter shop. Clapboard exterior, shingle roof, steam heat, electric light. Ward room has plaster walls, open truss roof, all other rooms plaster walls and ceilings, standard base, window and door trim, plaster and trim painted. Toilet room floors have marble cubes, marble wainscot and cove base, all other floors hard maple. Steam heat. Gas and electricity. Floor area 4,636 square feet.

No. 5, North Ward, wood frame on brick foundation, two story, basement in rear, one story in central portion and none in front portion. Ward room has plaster walls, open truss roof, all other rooms have plaster walls and ceilings. Steam heated, electric lights. Toilet room, marble cubes, marble wainscot and cove base, all other floors hard maple. Floor area 7,690 square feet.

No. 6, Attendants' Quarters, three story brick, slate roof, kitchen has magnatite floor. Toilet room first floor terrazzo with marble beaver base and wainscot. Third story toilet porcelain tile floor and base. All other rooms rift hard pine floors, standard base, window and door trim. Plastered walls and ceilings, all wood and plaster painted. Steam heat. Gas and electric lights. Floor area 4,820 square feet.

No. 7, Boiler House, one high story, brick walls, slate roof and 3-story brick tank tower with tin roof. Two rooms have plaster walls and ceilings, standard base, window and door trim, wood and plaster painted. Wood floors in finished rooms 3¼ D & M pine. Two rooms brick walls whitewashed, open rafter ceiling, brick floors. Steam heat. Gas and electric light. Floor area 1,944 square feet.

No. 8, Laundry, one story brick, slate roof, plaster walls and ceilings, not painted, cement floors and base throughout. Newly remodeled. Steam heat. Electric light. Floor area 1,026 square feet.

No. 9, Barn, wood frame on brick and concrete piers, one story and loft, stable portion has concrete floor, walls and ceiling sheathed with 5" D & M, all other rooms D. & M wainscot 6'-0" high. Plaster walls and ceilings unpainted. Painted trim, 12" plank floors. Loft has no finish and 12" plank floors, no heat, electric lights. Floor area 1,000 square feet.

No. 10, 11, 12, 14, 15, 16, Tent Houses, one story wood frame on concrete piers, ruberoid paper roofs, clapboard exterior, painted, open studs but rafters ceiled with D & M sheathing, not painted, heated with stoves, electric lights, built by station labor. Floor area each 180 square feet.

No. 13, Wood frame toilet for tent house patients, one story wood frame, ruberoid paper roof, painted exterior, sheathed interior walls only, varnished, no heat, electric lights. Floor area 48 square feet.

(2) Offices.

Surgeons' Office.

Located on the southwest side of the first floor of the executive building is a good sized room, rather poorly lighted and contains rather too much furniture. This room is used by the officer in charge of the station and his assistants. The equipment is adequate.

Pharmacists' Office.

Located to the north of the Surgeon's office and adjoins the dispensary. It is of sufficient size and is used as a combined office and files room. A desk is needed in which important papers can be locked up.

(3) Reception Room.

There is no special room for this purpose. Visitors are received in the hall of the executive building in the offices and in the wards on Tuesdays, Thursdays and Saturdays.

(4) Examining Room.

There is no room for special examinations. Patients and those undergoing physical examinations are examined in the sterilizing and wash up room, the operating room and in the dressing rooms at the ends of the wards. Should a room be set aside for this purpose a special outfit would be needed.

(5) Kitchen and Diet Kitchens.

The main kitchen is located at the north end of the second floor of the attendants'/kitchen building. It is a good room of sufficient size, well lighted and equipped. It is f rnished with a gas range, a fine table with metal top and an excellent sink of large size.

There are no diet kitchens properly speaking. A gas range is placed in the dining rooms at the ends of the wards and used for the purpose of preparing special articles of diet and warming food for patients confined to bed.

(6) Pantry and Food Storage.

There is a pantry fitted with shelving between the kitchen and dining room in the attendants' building which is used for the storage of dishes and kitchen utensils.

A wall cupboard with doors is located at one end of the kitchen and is used for the temporary storage of kitchen supplies. Lockers or bins for the storage of vegetables are located beneath this wall cupboard.

A refrigerator room, made by enclosing the porch on the west side of the kitchen is used for the storage of meats, eggs, milk, etc. It is provided with a composite floor.

(7) Store Rooms.

Medical stores and glassware are stored in a room in the basement of the extension to the executive building directly under the pharmacy and connected with it by a spiral stairway. It is sufficient for the needs of the station.

Stationery, linen and records are stored in rooms in the basement of the older part of the executive building beneath the pharmacists' office and the toilet room on the first floor and are adequate for present needs.

General storerooms for furniture, miscellaneous articles, lumber and unserviceable property are located in the basement of ward 3 (colored ward) and are considered ample for present needs.

There is a proposition to convert these rooms now used for storage purposes into an extra ward for colored patients, to be used during the winter months when the present ward space is crowded. If this should be done, it would be necessary to excavate and construct rooms for storage purposes in the unused part of the basement of ward 3 at the south end, now unused. This change is recommended.

(8) Quarters for Officers.

Surgeons' Quarters (now used as quarters for Assistant Surgeon-General Carter in charge of station) are located in a two story frame house with brick basement, with kitchen and dining room frame extension with a fuel room in the basement, placed at the southeast part of the reservation. On the first floor including the extension there are the following rooms:- Sun porch, parlor, hall library, bedroom, two closets, dining room and kitchen. On the second floor there is one large bedroom, three smaller bedrooms and a bathroom. These quarters are comfortably furnished and no new equipment is needed.

Surgeons' Quarters.

Located on the upper story of the executive building, consists of the following rooms:- Parlor, dining room, kitchen, bathroom and two bedrooms. A new rug for the dining room and one for the bath room are needed for these quarters.

Assistant Surgeons' Quarters.

Consist of one room and a small bath room on the second story of the executive building. Equipment sufficient for present needs.

Pharmacists' Quarters.

Consist of five small rooms located on the second story of the executive building, viz:- Sitting room, bedroom, bathroom, kitchen and dining room. The kitchen and dining rooms in these quarters are small rooms of frame construction built out from the airshaft of the extension to the executive building. A wardrobe is needed for the bedroom in these quarters.

Internes' Quarters.

Two internes are quartered in one room on the east side of the first floor of the executive building (old Surgeons' office) and have the use of the bath and toilet between this room and the sterilizing and wash up room. The outfit for this room is sufficient.

(9) Quarters for Attendants.

One nurse is quartered in one room in the north ward, one in the center ward and two in one room each in the south ward. Twelve attendants are quartered in the kitchen and attendants' building, five in five rooms on the first floor, and seven in five rooms on the third floor of the same building. There are toilets for the use of these attendants on the first and third floors.

Four attendants do not sleep on the reservation, viz:- The engineer, laundryman, temporary night nurse and clerk.

These quarters require tables, chairs, wardrobes, chiffoniers and small rugs.

Separate quarters, apart from the ward buildings, should be provided for the nurse for tubercular patients, who is now quartered in one of the rooms at the end of the colored ward.

(10) Patients' Dining Rooms.

Rooms for the purpose are located at the end of each ward and are equipped with tables, sink, necessary tableware and gas stoves for food warming and special cooking. These rooms are sufficiently equipped but the old granite tableware needs renewal or replacement by iron stone china or aluminum.

(11) Internes' and Officers' Dining Room.

A portion of the attendants' dining room in the kitchen and attendants' building is partitioned off by a screen and used for the above purpose. It is used by the assistant surgeon and the two internes on duty at the station. A new dining table is needed to replace an old one worn out.

(12) Attendants' Dining Room.

This is a large room located on the second floor of the kitchen and attendants' building, adjoining the kitchen. It is suitable for the purpose and sufficiently equipped.

(13) Recreation and Smoking Rooms.

Rooms for this purpose are located at the end of each ward, three in all. They are sufficiently furnished and suitable for the purpose.

(14) Disinfecting Facilities.

One Kinyoun-Francis circular two-ended steam sterilizer with Formalin Ammonia attachment is located in a room next the boilers in building No. 7, and should be placed in an adjoining room in No. 6, vacated by old laundry; one Kny-Scheerer dressing sterilizer, new; one Richard Kny dressing sterilizer (unserviceable); one Kny-Sprague instrument sterilizer; two Kny-Scheerer

utensil sterilizers; one May Sprague water sterilizer, in sterilizer room, building No. 2.

(15) Incinerators.

There are none. Sputum and bandages are burned in an open fire in the yard. A water-jacketed incinerator should be installed in the boiler house in the room now occupied by steam sterilizer. Garbage is removed from closed cans daily which is satisfactory.

(16) Disposal of Soiled Linen.

Removed from the wards and rooms in bundles made from sheets and taken directly to the laundry. Soiled linen is soaked in 5% carbolic solution overnight, or disinfected by steam.

(17) Laundry Facilities.

A newly equipped laundry has been installed in building No. 8 which has been remodeled from a sterilizer building, and is equipped with two steam rotary washers, one centrifugal dryer, each of Troy Laundry Machinery Co. make, with individual motors, one 9-track Troy steam dry room, one copper soap boiler, one Columbia 108" steam mangle and one shirt machine, each motor driven, one motor driven Ziedler collar machine, one motor driven National Marking Machine, one Troy starch table and two Troy ironing tables, one gas burning iron heater, two electrically heated hand irons, eight soapstone set laundry tub (one of which is broken but is not needed). All apparatus is new and in first class condition. Steam is supplied from high pressure boiler in building No. 7 nearby. The arrangement is satisfactory.

(18) Operating and Surgical Dressing Room Facilities.

There is one large operating room located on the first floor of the extension to the executive building. It has tile floor and wainscot, is lighted by skylight, windows and electricity and fairly furnished. The operating table is old and of obsolete pattern and should be replaced by a modern table.

Sterilizing and Washup Room.

This is located in the room opposite the pharmacists' office (formerly the old surgical operating room) and is equipped with instrument, dressing, water and utensil sterilizers and a washup sink.

Surgical Dressing Room.

A small room has been made at the north end of the center and south wards by inclosing the small porch located there which is used for dressing purposes. Each room is fitted with a small sink and furnished with a table and one small instrument sterilizer. An additional instrument sterilizer is needed.

(19) X-Ray Facilities.

One room in the southeast end of the center ward is used for this purpose. It has an old Scheidel X-ray coil which requires too long an exposure to obtain results and should be replaced by a more modern apparatus. A new Rheostat is also required. A new electric battery for general treatment is needed to replace an old one worn out.

(20) Laboratory.

One room in south end of the colored ward is used for this purpose. It has a fair equipment sufficient for ordinary clinical work. At present the incubator has been sent to the Hygienic Laboratory for repairs. Wasserman's and special work are sent to the Hygienic Laboratory at Washington, D. C.

[illegible]

(32) [illegible].

[illegible]

(33) [illegible].

[illegible]

(34) [illegible].

[illegible]

(35) [illegible].

[illegible]

(36) [illegible].

[illegible]

(37) [illegible].

[illegible]

(38) [illegible].

[illegible]

(39) [illegible].

[illegible]

(40) [illegible].

[illegible]

(41) [illegible].

[illegible]

(42) [illegible].

[illegible]

(43) [illegible].

[illegible]

(21) Dispensary.
Located on the west side of the first floor of the extension to the executive building. It is a large room sufficiently equipped and suitable for the purpose.

(22) Wards for Seamen.
There are three pavilion ward buildings each having a main ward 28 feet wide, 16 feet high to eaves, and open to the roof with verandas on both sides.

The north ward is 77 feet long and is used for colored patients and the remaining two wards are each 108 feet long and are used for white patients, the center ward being reserved for surgical cases. Both medical and surgical colored patients are quartered in the north ward.

There are two pirvate rooms in the north ward and one in the south ward which are available for special cases.

In addition there are three rooms in the basement of the north ward which are used to care for the overflow from tent houses or wards, or for isolation cases.

Six tent houses are provided for tubercular cases and accommodate a total of twelve patients.

(23) Quiet Wards.
There are two rooms in the west end of north ward, one room in west end of south ward and three rooms in basement of north ward which are available for this purpose.

(24) Ward for Revenue Cutter Officers.
The small room at the west end of the south ward is set aside for this purpose. It has no private toilet or bath and is inadequate.

(25) Toilet Facilities.
Ample toilet accommodations have been provided for each building and are in good order except the following:- Sink in sterilizing room is cracked and should be replaced; three sitz tubs in ward toilets are badly cracked and should be replaced. All toilets are supplied with hot water from Hoffman instantaneous gas burning heaters which are new but need unions made tight which can be done by station force.

(26) Portable Tubs.
One old tub without rack on station. Brandt system of treating typhoid not used here.

(27) Padded Cells.
None. No restraint apparatus of any kind. Alcoholic and insane cases isolated and guarded by nurses. No arrangement for care of such cases by local authorities. Restraint should be furnished.

(28) Emergency Facilities.
There is a room in the basement of ward building No. 5 which has cement floor and sink, steam heat and electric light. Plaster walls and ceiling painted, and is satisfactory.

(29) Isolation Facilities.

Smallpox cases are sent to City Hospital. Other cases are cared for in the three rooms in basement of north ward or in tent houses if any are vacant.

(30) Out Patient Office.

Located in basement of custom house on Lombard Street side, consists of two large rooms, one waiting room and dispensary, the other the Surgeons' office. Part of this room is divided into a small dressing room and an examining room. The furniture is adequate and mostly furnished by the custodian of the Custom House. A few surgical instruments and some dispensing bottles are needed for this office.

(31) Floor Space.

In the hospital group proper, namely, the executive building, the three pavilion wards, the six frame tent houses and the kitchen and attendants' building, including the boiler house addition thereto, the total net floor space is as follows:

Basements and ground floors	7036	square feet
First floors	18028	" "
Second floor	3348	" "
	28412	" "
Halls	2902	" "
TOTAL	31314	" "

In this group —

the total net floor space for hospital uses is	73%
" " " " " " quarters (except hall) is	18%
" " " " " " halls (including quarters) is	9%
	100%

The surgeons' quarters are in a separate building devoted entirely to this purpose. The total floor area is 4164 square feet.

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 99 beds, maximum 122. On a normal basis each patient in the main wards has 108 square feet of floor space and 1700 cubic feet of air space computed on a height of 16 feet to eaves. There are no ceilings in the main wards.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal year 1909, 1913 and 1914 and also for the first eight months of the present fiscal year, as compared with the same period of the fiscal year 1914.

	1909	1913	1914	First 8 Mos. Fiscal years. 1915	1914
No. days hospital relief furnished	21888	21765	24394	15722	15931
Daily average hospital patients	60.0	59.7	66.8	—	—
Total daily cost per hospital patient	—	$1.65	$2.22	—	—
No. of hospital patients	569	623	691	—	—
No. of outside patients	1304	1489	1914	—	—
No. of times treated	2309	2135	2596	—	—

On April 23, 1915, there were 75 patients, of whom 19 were chronics and 11 tubercular. Of the 75 patients, 48 were white and 27 colored.

The maximum daily number in the hospital since October, 1912, was 99 in February, 1914; minimum 40 in September, 1914. Records prior to that time are not readily available but it is probable that the figures given represent the extreme conditions during recent years. The number of days hospital relief furnished in 1914 was 11% greater than in 1909 and 12% greater than in 1913. During eight months of the present fiscal year the relief furnished has been substantially the same as for the same period of last year. During the past five years the number of out patients has increased 46% but the number of times treated has remained practically the same.

(34) Ambulance Service.

The station has one two-horse ambulance in good condition which is used for all calls. Present facilities are adequate.

(35) Heating, Power Plant and Ventilation.

All buildings except the barn, six tent houses and tent house toilet building are heated from a central heating plant in building No. 7 from two return tubular brick set boilers, using low pressure direct steam to wrought iron radiators with gravity returns. These boilers were installed in 1886 and are in poor condition. One has a patch on the shell over the grate bars, and a blister next the patch. The other is somewhat better, having had new tubes installed about 18 months ago. The boilers are operated at from 7 to 18 pounds pressure, according to weather conditions, but are unable to properly heat all buildings in cold weather. New and larger boilers should be placed in the present space, which will not necessitate building changes. Power is supplied to laundry sterilizer from donkey boiler in building No. 7 which is in good condition except for grate bars which should be renewed.

One Davidson steam pump, single cylinder, double acting, is in fair condition but has not been used since city water supply was connected. This was formerly used to fill an iron tank in the tower of No. 6, used for temporary supply when city service is stopped for repairs, etc., which is infrequent. It should be retained. Tank has a capacity of 5500 gallons and is in good condition. Steam radiation should be extended to tent houses. Ventilation is by doors, windows and roof ventilators, which is satisfactory.

(36) Illumination.

All buildings are well illuminated with electric light through new and satisfactory fixtures. Wards have new direct indirect fixtures, installed 1914; fixtures in other building installed 1911. All are good. Electric service 115-230 volt alternating current, 60 cycle, single phase, wires in flexible metal conduits and steel conduit, all in good condition.

(37) Decoration.

All buildings are neatly painted outside and inside. Inside work completed in 1914 and is in good condition.

(38) Telephone and Call Systems.

There is one direct connected city 'phone, Bell system, in pharmacists' office with one extension in surgeons' quarters. There is an intercommunicating telephone system of 16 stations of which 11 are connected up. The system is in fair condition but needs a general overhauling.

All wards and ten houses are equipped throughout with a bedside call system with annunciator and bell in dining room of center ward. System is in good condition. There is also a watchmen's portable clock system of 3 stations.

(39) Ice and Refrigerating Facilities.

There is no refrigerating system. Artificial ice is supplied to refrigerators as needed, which is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from city mains in Remington Avenue through 4" connection to power house and branches to various buildings and hydrants. The quality of the water is excellent, supply ample and pressure about 60 pounds.

The station has six two-way fire hydrants, 1½" and 2½" connections, well distributed about the grounds. There are no hose connections within any of the buildings.

There is a 5500 gallon tank in brick tower at power house which is available for emergencies in case city supply is shut off but practically unused.

One tank in attic of attendants' building and in executive building are not used.

There are four wheel hose reels and 200 feet of 1½" and 100 feet of 2½" linen hose in good condition.

The station is provided 14 quart Pyrene chemical extinguishers and 7 of the 3 gallon type. There is an old small chemical fire engine of no value. The pressure at the hydrants, especially those in the rear is not as large as it should be on account of the small pipe connections from 4" main.

New 4" connections should be installed to all hydrants and hose reels with 100 feet of 1½" linen hose direct connected to mains should be installed on the verandas of each of the buildings.

At lease 200 feet of 1½" and 300 feet of 2" hose should be supplied for the wheel hose reels in addition to that now on hand.

Twelve additional chemical extinguishers of the 3 gallon Underwriter type should be provided.

There is one city fire hydrant on Remington Avenue in front of Surgeons' quarters and one in the park in the rear of the reservation. City fire engine is about 10 blocks away.

(41) Fire Alarm System.

The station has a fire bell in the rear of the executive building which is struck by hand. Drills are held on an average once each week. City fire alarm box is three blocks away. Facilities adequate.

(42) Sewer and Other Drainage.

Sanitary sewage is discharged through four main lines into cesspool in rear of new laundry. Overflow discharges through pipe line into creek. The city will shortly install a trunk sewer along the creek and overflow will then

discharge into it. When this is accomplished, present cesspool should be filled up and made into a manhole. Storm water discharges through open gutters and underground drains into catch basins in streets. Rain water from many of the buildings discharges directly into cisterns of which there are six. These cisterns are generally sealed and the overflow discharges into surface gutters.

(43) Streets, Roads, Walks, Fences and Grounds.

The station is well provided with macadam roadways with brick gutters. Entrance to upper level is from Remington Avenue and to lower level is from Park Drive. Although these roads were macadamized last year, the surface is loose and needs early repairs in the shape of oil treatment. When this is done, the driveway at the service elevator entrance, kitchen building, should be widened so that teams can turn around without backing.

The various buildings are connected with an adequate system of cement walks in good condition. There is a brick sidewalk on Remington Avenue but none on Park Drive.

On the Remington Avenue boundary there is a heavy stone retaining wall, returning on Park Drive a short distance, surmounted by iron picket railing on Remington Avenue. There is a carriage entrance opposite the surgeons' quarters with iron grille gates and a main entrance for pedestrians opposite the executive building with granite steps and pipe railing.

The southern boundary adjoining the private land is marked by a rough unpainted board fence built partly by the hospital and partly by John Hopkins, the owners of the private property. This is unsightly and should be replaced by an iron picket fence or at least the part of it in view from Remington Avenue. The remaining boundaries are marked by a wooden picket fence in fair condition but in need of painting.

(44) Wharves, Sea Walls, Etc.

None, - no waterfront.

(45) Livestock, Etc.

The station has two horses, 13 and 12 years old, respectively. The younger is in good condition but the older should be replaced within a year or two.

There is also one 2-horse ambulance, one Dayton wagon, one express wagon, one dump cart and one horse lawn mower, all in good condition except the lawn mower which is poor.

(46) Personnel.

There are on duty at this station three commissioned officers, one assistant surgeon-general, one surgeon, one assistant surgeon, two internes and nineteen attendants classed as follows:- One engineer, one night fireman, one clerk, one carpenter, one painter, one driver, one nightwatchman, one yardman, first and second cook, one waiter, five nurses, two messengers and one laundryman.

The force is considered sufficient but the pay of the driver, two nurses and the laundryman should be increased to $40.00 per month each.

(47) Records.

The records of the station are properly kept and in good order, with the exception of the clinical records which are incomplete and poorly kept.

(48) Books.

There are a few modern medical books in the station library but the majority of them are old and out of date.

(49) Purchase of Supplies.

Subsistence, fuel and other supplies are purchased on quarterly accepted proposal without formal contract. Has no special advantage over yearly contract. Purchase in the open market would be the best plan in the large city like Baltimore.

APPENDIX A.

Marine Hospital at Baltimore, Md.

Appropriation for Repairs & Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
35	Carpenter work in connection with extending heating service to tent houses	$ 80.00
7	Finishing new ward in basement	1200.00
38	Repairs to telephone system	200.00
40	Extension of fire mains, new hose, 3-hose racks and hose, and 12 chemical fire extinguishers, 3-gallon underwriter type	1000.00
43	Repairs to roads and fences	1200.00
		$3660.00

APPENDIX B

Marine Hospital at Baltimore, Md.

Appropriation for Mechanical and Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
28	Surgeons' washup sink in sterilizing room	$ 150.00
	Three new sitz tubs in ward toilets in ward building	225.00
35	Two new 100 horsepower low pressure boilers with oil burning furnaces	4000.00
35	New grate bars for donkey boiler	25.00
35	Extending steam radiation to 6 tent houses	1000.00
		$5400.00

APPENDIX C.

Marine Hospital at Baltimore, Md.

New Construction.

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
	New Hospital buildings and equipment	$375,000.00

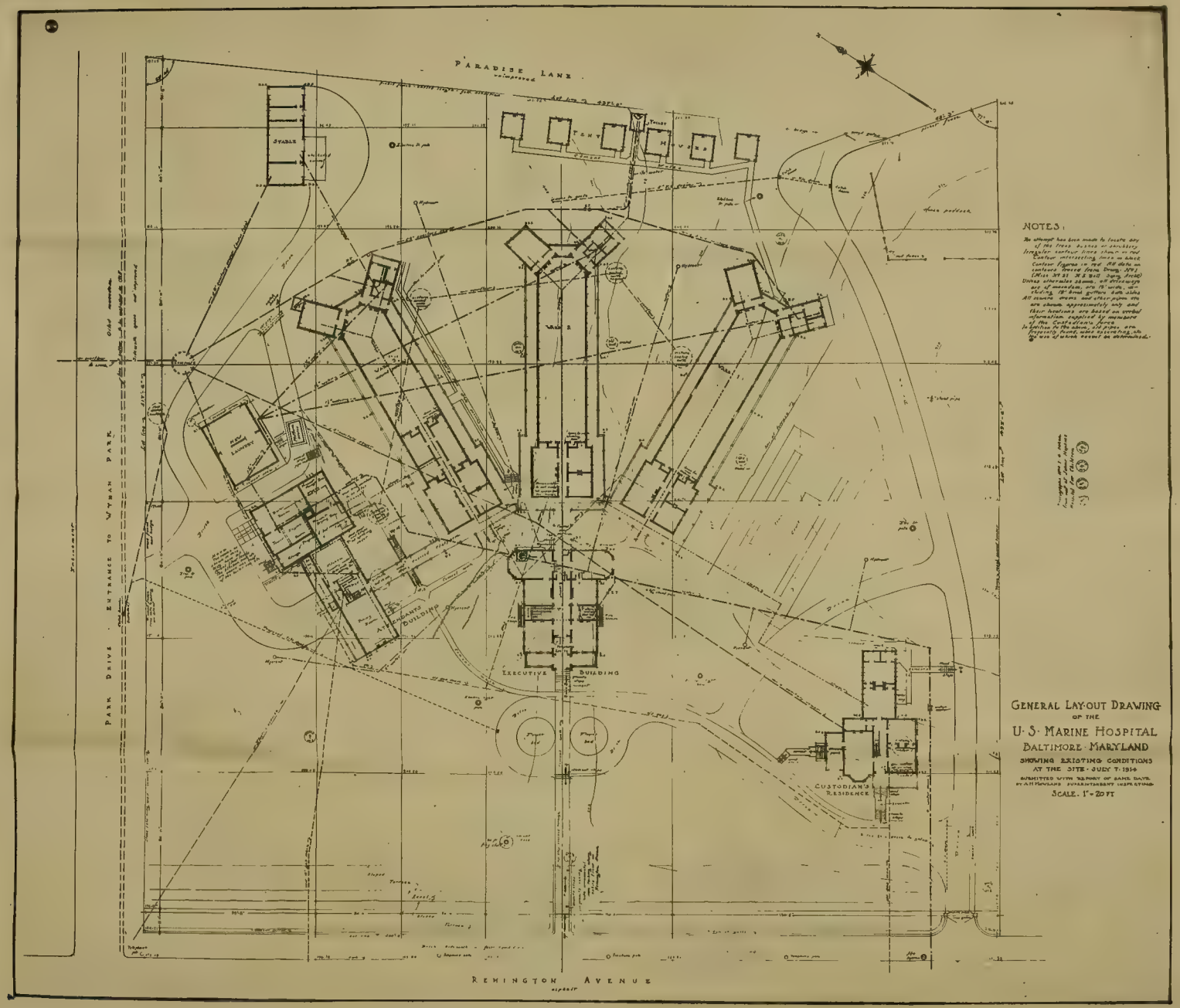
APPENDIX D.

Marine Hospital at Baltimore, Md.

Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	Estimated Cost.
30	Office (out-patient)	$ 36.00
3	Offices (hospital)	47.00
22	Wards	237.50
18	Operating and Surgical dressing rooms	251.50
21	Dispensary	24.00
4	Examining room	271.50
20	Laboratory (incubator)	93.00
19	X-Ray room	125.00
5	Dining rooms	317.10
8	Quarters for officers	259.40
9	Quarters for attendants	150.00
27	Restraint sheet	10.00
15	Water jacketed incinerator to be installed in building No. 7	200.00
	TOTAL	$2022.00



Estimates, test of capacity
1/5

VIEWS OF U·S·MARINE·HOSPITAL

BALTIMORE · MD ·

ADMINISTRATION BLD'G

ATTENDANT'S QUARTERS

SURGEON'S RESIDENCE

GENERAL VIEW

SHOWING ROOFS OF WOOD BLDGS

SHOWING ROOFS OF WOOD BLDGS

PART OF GROUNDS

POWER HOUSE LAUNDRY

VIEWS OF

U·S·MARINE·HOSPITAL

BALTIMORE · MD ·

REAR OF WARD BLDG.

TYPICAL WARD

TENT HOUSE GROUP

TENT HOUSE INTERIOR

LAUNDRY

INCINERATOR

October 12, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Baltimore, Md.

There are no adequate quarters for Coast Guard officers at this hospital and it is therefore requested that action be taken as soon as possible to construct the dressing room at this hospital, for which Congress has appropriated $2500. The operating and sterilizing rooms can be moved to this building as soon as it is completed and the rooms in the executive building now used for this purpose can be fitted up for the reception of Coast Guard officers.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

BOSTON, MASS.

BY -

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

U. S. MARINE HOSPITAL, BOSTON, MASS.

Report of inspection made October, 1914, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The present site of the hospital is situated on a marked elevation overlooking Boston, Charlestown, Boston Harbor, the Mystic River, East Boston and Chelsea. In the distance and towards the eastward and northward are East Lynn and Nahant.

The reservation is high, commanding and has abundance of fresh air and sunshine, although somewhat exposed to the winter storms. It was formerly well shaded but many of the beautiful elms have died from the effects of coal smoke from adjoining factories, tree parasites and insects and some have been cut down and removed. These grounds are spacious, well drained, have macadam roads, cobble stone gutters and cement and slate sidewalks.

(2) History.

The present Marine Hospital is the third building of that class erected by the U. S. Government for the care of sick and disabled seamen at the port of Boston, Mass.

In 1802 a site was selected for a Marine Hospital on the right bank of the Mystic River in what is now a part of the Naval Reservation in Charlestown. The amount of land set apart for this purpose was five acres and on this a two-story brick building with basement, which contained nineteen rooms, a large hall and a kitchen, was erected. This building cost $14,842.34 and was located on the site of the present officers' quarters near the Chelsea bridge. This building was first occupied in January, 1804, and was the first general hospital erected in Boston.

In the early twenties, this building was abandoned and a site chosen for a new building in Chelsea, Mass., which consisted of twelve (12) acres and on this a granite building was erected, 150 X 50 feet, three stories and a basement, and occupied in 1827. The site cost $4,068 and the building cost $32,168.06. It was occupied as a Marine Hospital from 1827 to 1860, when it was abandoned for sanitary reasons.

In 1859, Congress authorized the erection of a new building and ten acres of ground was transferred from the Naval hospital reservation in Chelsea, Mass., as a site. The original naval reservation consisted of 115 acres and was purchased in 1823 at a cost of $18,000.

This hospital was first occupied in 1860.

[illegible]

[illegible] institutions [illegible] to [illegible] to the [illegible].

I.

[illegible]

(a) [illegible].

[illegible]

[illegible]

(b) [illegible].

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

The hospital and storage buildings cost $395,000.00. The engine and boiler house, $9,858.00, the stable and barn $3,392.00 and the isolation building $2,000.00.

The second hospital building was sold in 1867 for the sum of $54,803.38 but the wharf and water front were reserved and are now owned by the Service and are at present leased to private parties.

(3) Need for a Marine Hospital.

As the U. S. Government has provided relief for sick and disabled seamen at this station in some form since 1798 and as the first hospital was erected for this purpose in 1804, it is reasonable to think that such a service will always be needed at the port of Boston.

(4) Adequacy of Plant.

The existing plant is adequate for present needs and by some rearrangements of the different working units, such as the operating room, quarters for officers and attendants, can be more nearly brought up to a modern standard of efficiency. These recommendations are described in detail under Section III.

The capacity of the hospital is ample as far as can be foreseen for some time to come. The hospital relief furnished is less than that furnished five years ago and its present normal capacity is double the average requirements last year. The maximum capacity is 110, while the largest daily number quartered there in the past twelve months was 72. The results so far for the present fiscal year indicate that the demands for 1915 will not exceed those of 1914.

(5) Acquisition or Disposal of Land.

The reservation of ten acres on which the present hospital is located is ample for all future needs and none of it should be disposed of.

The Government still owns part of the site of the old hospital, known as the wharf property, which consists of approximately 91,000 square feet and is located on Marginal St. between Shurtleff and Pearl Streets, with a frontage of 347.65 feet and extends back to the harbor line, comprising about 90,000 square feet, with a wharf off the center of the rear, with berth slip on either side. The land lines form a letter T. There is 1 two-story and 1 one-story wood frame building next the street, one of which is used as a coal yard office and the other as a stable and wagon shed. Neither building has any commercial value. On the wharf there has been constructed by the lessee a wooden coal pocket, of rough unpainted timber, which is in fair condition.

A lease was made under date of December 24, 1911, for the rental of this property for five years at $2000.00 per annum, payable quarterly in advance, the lessee to keep the property in repair and deliver, at expiration of lease, the property and all buildings thereon to the Government.

While there is no apparent immediate need of this property, it should not be sold as it might make a good wharf for Lighthouse or Revenue Cutter Service and, until some need appears, it is believed the lease should be continued from period to period, as the rental appears to be just and equitable.

Minor repairs to the east side of the wharf, damaged by storm, should be demanded of the lessee. The damage is shown in photo herewith, marked No._____

(6) Future Development or Disposal of Plant.

The present plant should not be disposed of. The present hospital lends itself to expansion to an extent which is believed will be adequate for all future needs, with only minor alterations to the building, when the entire building is devoted exclusively to hospital purposes and all officers (except the Internes and Junior Pharmacist) and all attendants are quartered outside the main building. The rearrangement is the result of careful study and serious consideration and it is believed would adequately supply the needs of a Marine Hospital at Boston.

The provisions made therein are briefly as follows:
THE FIRST FLOOR would be devoted entirely to administrative purposes, detention ward and quarters for Internes and the Junior Pharmacist. In addition to the facilities already provided, utilize the space now occupied as officers quarters as follows:

Patients' examining and reception rooms, southeast corner of south wing.

Detention Ward, northeast corner of north wing. This space can be permanently closed off from the main building.

Revenue Cutter Officers' Quarters; The two rooms in south wing on opposite sides of the main hall will accommodate two officers to each room, maximum, one each normal.

Laboratory, Two rooms in west corner of south wing now used as kitchen and dining room.

X-Ray, One large and one small room north of the main stairhall for X-Ray and dark room.

Internes Quarters, One large room and bath in the north wing, east of main hall, will accommodate two Internes.

Junior Pharmacist's Quarters, is at present south of stair hall.

SECOND FLOOR.
Utilize all space in south wing now occupied as quarters for officers for ward purposes, making two large wards, one on each side of the main hall. Ample space is available for such additional toilet facilities, etc., as may be needed by partitioning off portions of any of the various wards.

THIRD FLOOR.

Utilize space in south wing to west of main hall for one large ward. Divide room north of stair hall to provide surgical dressing room and room for nurse on duty, diet kitchen or other purposes. Additional toilet facilities, etc., can be provided as needed in the same manner as on the second floor.

FOURTH FLOOR.

Utilize the entire space east of main hall, north wing, for operating suite, consisting of operating room, surgeon's wash up and dressing room and sterilizing and etherizing room. Devote remainder of space on this floor to ward purposes, quiet rooms and accessory rooms required.

QUARTERS.

Quarters on the reservation need only be provided for the Surgeon in command, his senior assistant, for the Pharmacist and for the attendants.

Other officers can live in private quarters in the city.

A third boiler for which space is available in boiler house will be required if additional buildings are erected.

These changes would increase the bed capacity to 180 or 200 and would meet all probable contingencies of possible growth. Further expansion would have to be provided for by the erection of additional hospital buildings for which there is ample space on the reservation.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings (for details see appendix A)

Total estimated cost of work recommended, $8,789.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)

Total estimated cost of work recommended, $4,870.00

(3) Legislative Appropriation for New Construction. (for details see appendix C)

Total estimated cost of work recommended,

(4) Appropriations for Administrative Equipment (for details see appendix D)

Total estimated cost of items recommended, $6,234.00

T O T A L - - - - - - $19,893.00

(5) Personnel.

One Junior Pharmacist or clerk is needed.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, main hospital, pressed red brick, with granite trimmings, cast-iron ornamental verandas on four sides. Four stories, basement and attic, slate and copper roof, fireproof to first story. Pine trim painted, plaster walls and ceilings painted, floors, terrazzo, marble and tile wainscot in toilet rooms, tile floor and wainscot in operating room, 3¼ D & M hard pine elsewhere except basement which has cement floor. Attic unfinished. Floor area, 42,582 square feet, steam heat, electric and gas light.

Building No. 2, isolation hospital, one-story wood frame over brick basement, creosoted shingle exterior shingle roof. Pine trim painted, plaster walls and ceilings painted 3¼ D & M hard pine floors painted, basement under one room only has unfinished brick walls, cement floor, floor area 1,000 square feet, steam heat, electric light.

Building No. 3, necropsy house, one-story wood frame on brick foundation creosoted shingle exterior, shingle roof. Plaster walls and ceiling, cement floor and base, pine trim painted, steam heat, electric light. Floor area 324 square feet.

Building No. 4, watchman's lodge, one-story wood frame on brick piers, clapboard exterior, shingle roof, pine trim painted, plaster walls and ceilings not painted, 3¼ D & M pine floor, stove heat, oil lamp. Floor area 165 square feet.

Building No. 5, Boiler house, one-story brick with slate roof, on steel trusses, fireproof, painted brick walls, cement floor, about six feet below grade of yard. Floor area 845 in boiler room with underground brick coal pit with top level with ground, has brick walls and floors and ceilings unfinished. Floor area 522 square feet, no heat, electric light.

Building No. 7, Laundry. One-story brick with slate roof, has cement floor and wainscot, painted brick walls, open truss roof, steam heat, electric lights. Floor area 1,454 square feet.

Building No. 6 & 8, Storehouses. One-story brick with slate roof, cement floors and base, plaster walls and ceilings on brick, painted, fireproof, except roof, pine trim painted, no heat, gas lights. Floor area 936 square feet in each building.

Building No. 9, Barn. Two-story wood frame over brick basement, clapboard exterior, shingle roof. Harness room has D & M walls and ceilings, D & M hard pine floor. Balance of building has no interior trim. Basement has cement floor, all other floors plank, stove heat, electric light. Floor area 4,500 square feet.

Building No. 10, Wagon-shed. One-story leanto off of building No.

III.

(2)

8, open front, dirt floor, clapboard exterior, no interior finish or paint. No heat, no light. Area 1,894 square feet.

Building No. 11, Surgeon's Kitchen Storehouse. One-story brick with slate roof, cement floor, no interior finish or paint.

(2) Offices.

There are two offices, that of the Medical Officer in Charge and that of the Pharmacist, located on the south side of the main entrance to the building. They have sufficient furniture but new carpet and rugs are required.

(3) Visitors Reception Room.

One general reception room adjoins the dispensary and is used for visitors and patients. Poorly furnished. New chairs needed and a new floor is urgently required.

(4) Examining room.

No general room for examining purposes, except the general dressing room, and a small room used for eye, ear and throat cases, both located on the second floor. An examining room should be provided by utilizing the room on the first floor now reserved as quarters for second pharmacist and a small room adjoining, now a part of surgeo's quarters, and used as a bedroom. All facilities required for eye, ear and throat work should be concentrated in this space.

(5) Kitchen and Diet Kitchens.

The hospital kitchen is located in the northwest corner of the building on the first floor and is fairly furnished, a new refrigerator, a kitchen table and some new kitchen utensils are needed. A new floor is urgently needed and the walls and dumb waiter need cleaning and repainting. There is no kitchen storeroom adjacent, all subsistence stores being kept in a room in the basement. A large kitchen sanitary cabinet would be a great convenience.

A new top is needed for the kitchen range, which is otherwise in good condition.

(6) Pantry and Food Storage Room.

There is no pantry or food storage room on the same floor as the kitchen, and if a sanitary kitchen cabinet is furnished, none is required.

(7) Storerooms.

Storerooms are located in the basement for subsistence, medical stores, hospital supplies, glassware, etc., and are ample for the present needs.

(8) Quarters for Officers.

Quarters for the Medical Officer in charge, or Surgeon's quarters, are located on the first and second floor in the south wing of the building. On the first floor are two reception rooms, dining room, kitchen and servant's bedroom. On the second floor there are three bedrooms, a library and bathroom. They are well furnished and no additional furniture or carpets are needed.

The PASSED ASSISTANT SURGEON'S QUARTERS are located in the northeast wing of building on the first floor, consisting of a sitting room, dining room, two bedrooms, a storeroom, bath room and kitchen. Additional furniture and carpets are needed and all of the rooms require cleaning, repairs to walls and painting.

The quarters are not satisfactory for living quarters on account of the poor arrangement of the toilet room and provision for their correction has been made in specification now in the Supervising Architect's office, Washington, D. C.

ASSISTANT SURGEON'S QUARTERS. These consist of two rooms in the basement, two on the first floor and one on the second floor in the south wing of the building. They are poorly furnished and require refurnishing, cleaning and painting.

INTERNE'S QUARTERS. These consist of one room on the third floor, adjoining the operating room. Two Internes occupy this room and use a bath and toilet on the fourth floor. Internes' quarters should be moved to the south wing, fourth floor, in the large room across the main hall from the Senior Pharmacist's quarters. The present quarters are required to improve the operating and surgical dressing facilities.

SENIOR PHARMACIST'S QUARTERS. They are located on the fourth floor and consist of four rooms, sitting room, bedroom, dining room, kitchen and a bathroom. They are comfortably furnished but a double bed is needed, and a hall carpet. Wash tubs should be provided in the kitchen of these quarters.

JUNIOR PHARMACIST'S QUARTERS. (None on the station at present) The Junior Pharmacist's quarters occupy one room on the first floor on the east side of the building across the corridor from the Pharmacist's office.

These quarters should be moved to the fourth floor, south wing, to room adjoining room recommended to be assigned as Internes' quarters. The present quarters are needed for examining room facilities.

(9) Quarters for Attendants.

Twenty-two male attendants are lodged in nine rooms on the fourth floor of the building and one is lodged in the small building at the entrance of the grounds. In general, these quarters are furnished with old dilapidated furniture and worn out rugs. New furniture and rugs are need-

ed for these rooms. A toilet and bathroom is located on this floor for the use of attendants.

The two end sections of the Hamilton ward on the fourth floor should be subdivided to give two rooms in each section, making four rooms with a capacity of two attendants each and quarter all attendants moved from those rooms recommended to be devoted to other purposes. The doorways between the middle and end sections should be permanently closed up and the middle section used for ward purposes.

(10) Patients' Dining Room.

The patients' dining room is located on the second floor in the northwest corner of the building in a large room and has a good steam table and sink. Iron-stone chinaware is needed to replace the old defaced graniteware now in use, and a new table with a hard wood top of birch or maple is needed for serving purposes.

(11) Interns' and Officers' Dining Room.

Interns, sick officers and Junior Pharmacist have a separate dining room opposite the general or patients' dining room. It needs a china closet and table linen.

(12) Attendants' Dining Room.

Attendants are served meals in the general dining room used for patients but at a separate table.

(13) Recreation and Smoking Rooms.

The only recreation rooms for patients are two smoking rooms located on the second and third floors on the east side of the building and adjoining the toilets on these floors. They are considered sufficient for present needs.

(14) Disinfecting Facilities.

The present disinfecting apparatus consists of one single ended Kinyoun-Francis sterilizer which is old and inefficient. A new modern disinfector should be supplied and located in Building No. 8, contiguous to the tunnel for removal of ashes, where steam connections will be available at small cost.

(15) Incinerators.

There is a soiled dressing incinerator located in the basement directly under the kitchen , which is too small and is worn out. It should be replaced with a coal burning water jacketed machine.

(16) Disposal of Soiled Linen.

The soiled linen is removed from the wards and rooms in hampers

and bundled sheets. It is not passed through the steam sterilizer in the basement but, in suspicious cases, the linen is soaked in bichloride solution before it is taken to the laundry. As a general practice, the soiled linen goes directly to the laundry without any disinfection.

(17) Laundry Facilities.

The laundry facilities are well taken care of in a very satisfactorily arranged and equipped building, and needs no additional space or equipment, other than closed tote baskets for carrying soiled clothes from the wards.

(18) Operating and Surgical Dressing Room Facilities.

There is one room provided for operating purposes located in the southwest corner of the south wing. A surgical dressing room is provided on the second floor where the surgical wards are located. The entire portion of the south wing west of the main corridor should be remodelled so as to provide for operating room, sterilizing and etherizing room, surgeon's wash up and dressing room and surgical dressing room. This space contains at present an operating room, X-Ray room and Internes' quarters. The present surgical dressing room vacated on the second floor can be used for ward purposes.

Although the southern and western exposure for the operating room is somewhat objectionable, a relocation in another part of the building is not believed to be warranted at the present time.

This section requires a new instrument sterilizer, new instruments and operating gowns. See Appendix D and "Administrative Equipment" sheets.

(19) X-Ray Facilities.

The X-Ray room, now located next the present operating room, should be moved to the northeast corner of the north wing on the fourth floor and near the present laboratory and dark room. The present space is required for operating facilities. Some new tubes, plates and supplies are needed.

(20) Laboratory.

The laboratory is now located on the fourth floor, is well equipped and adequate for present needs.

(21) Dispensary.

Located on first floor adjoining the waiting room, is adequate in size and needs no additional equipment.

(22) Wards for Seamen.

SECOND FLOOR. There are two wards on this floor of 9 and 17 bed capacity. Both wards are at present used for surgical cases. With the

rearrangement recommended, the surgical dressing room should be used as a tubercular ward, accommodating seven additional patients.

Surgical cases should be quartered in wards on the third floor so as to be convenient to the operating and surgical dressing room facilities recommended to be provided in the remodelled west portion of the south wing.

THIRD FLOOR. There are five wards on this floor with a total normal bed capacity of 57, divided as follows:- 9, 7, 17, 10 and 14 beds.

FOURTH FLOOR. Three rooms, originally one long ward (Hamilton), are used for ward purposes. The middle room should be retained as a ward, the doors connecting with the end wards being permanently closed. These two end wards should be subdivided to make four rooms for attendants as recommended under paragraph 9.

Some new furniture is needed for the wards as indicated in "Appendix D" and "Administrative Equipment" sheets.

TUBERCULAR WARDS. Well advanced cases only are retained at the hospital, others are sent to Pittsburg, Pa., or Fort Stanton, N. M. These are quartered in one of the wards of the main building. With the rearrangement reccommended, the room now used as Surgical dressing room should be utilized as a tubercular ward. One of the windows should be changed to a door to give access to the veranda.

(23) Quiet Wards.

There are no rooms at present available for this purpose. The two rooms on the west side of the main hall fourth floor between the stairway and the north wing should be assigned as quiet rooms. These rooms are now occupied by attendants who can be quartered in new rooms across the hall, as recommended in paragraph 9.

(24) Wards for Revenue Cutter Officers.

One room (Vansant ward) in the north wing of the third floor is now used to accommodate these officers. They should be moved to the Purviance ward on the fourth floor, now used by attendants who will occupy rooms in the Hamilton ward when subdivided.

(25) Toilet Facilities.

The present toilet facilities are satisfactory as arranged, with the exception of toilet facilities for syphilitic patients who are now accommodated in the general toilet. A special toilet for these patients should be provided by partitioning off a part of the present Revenue Cutter officers' ward immediately opposite the syphilitic ward and next to patients' toilet on the third floor. The portion not used as a toilet will make a satisfactory attendants' room. The sick officers should be moved to the fourth floor in the Purviance ward as recommended in paragraph 24.

(26) Portable Tubs.

There is one very fine portable tub fitted with a rack for the

[illegible]

immersion of typhoid patients, which is sufficient for present needs.

(27) Padded Cells.

No special room for violent alcoholic or insane cases, no restraint sheet. Old Humane Restraint apparatus on hand. Such cases can be taken to city or state institutions or transferred to the Government Hospital for the Insane at Washington, D. C.

(28) Necropsy Facilities.

A well arranged autopsy room is provided in building No. 3. The facilities are adequate.

(29) Isolation Facilities.

A separate building is provided for this purpose north of the main building. The building contains two wards accommodating four and three patients respectively; a nurse's room, toilet with two closets, tub and slop sink; small storeroom and a small veranda, 7½' x 16'. The building is heated by steam from central plant and is in good condition for use.

Detention cases, pending sending them to city institutions, are kept in a ward in the main building, which practice should be discontinued and these patients quartered in the building provided therefor.

(30) Out-Patient Office.

Located in the Custom House, Boston, Mass. It is fairly furnished but additional furniture and some instruments are needed (Carpet rug and sterilizer) to be supplied when the office is changed from its present location, #287 Atlantic Avenue, to the new Custom House, Boston, Mass.

(31) Floor Space.

Total net floor space of main building.		
" " " " " basement,	8,300	square feet
" " " " " first floor,	5,500	" "
" " " " " second floor,	6,200	" "
" " " " " third floor,	6,500	" "
" " " " " fourth floor,	5,600	" "

Total net floor space for hospital uses	53%
" " " " " living quarters (except hall space)	22%
" " " " " hall space (including quarters)	25%
	100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital proper is 100 beds for

seamen and one bed for officers of the Revenue Cutter Service. In an emergency, 110 seamen and 2 officers can be accommodated.

On a normal basis, each patient has 73 to square feet of floor space and 1000 to 1200 cubic feet of air space. Seven patients can be accommodated in the isolation building.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914 and also for the period from July 1, to October 22, for the calendars years 1913 and 1914.

				Jul 1 to Oct.22	
	1909	1913	1914	1913	1914
No. days hospital relief furnished	24,792	29,446	20,189	6,296	5,682
Daily average hospital patients	77	80	50	--	--
Total daily cost per hospital patient,	--	$1.54	$2.54	--	--
Number of hospital patients	815	873	666	--	--
" " out-patients,	2,127	2,139	2,091	--	--
" " times treated,	3,479	3,751	3,563	--	--

On October 22, 1914, there were 58 patients in the hospital and 15 of these were chronic.

The hospital relief furnished was 31% less in 1914 than in 1913 and 18% less than in 1909. From July 1 to October 22, 1914, it has been 10% less than for the same period in the calendar year of 1913. The results for 22 days of October, 1914, indicate a gain of 16% over October, 1913.

The number of out-patients and treatments given them has remained substantially constant for the past five years.

(34) Ambulance Service.

Patients are at present hauled from city in station ambulance. If this practice is continued, a new horse must be purchased to replace one of those condemned. Private ambulance service can be obtained for $4.00 per day trip and $5.00 per night trip. Number of trips under present conditions average 8 per month. Private ambulance service should be provided and the condemned horse disposed of. One horse will be adequate for the needs of the station. A large part of the stableman's time will be available for needed work about the grounds.

(35) HEAting, Power Plant and Ventilation.

All buildings requiring heat, except the Lodge and Barn, are supplied by direct steam radiation from a central plant located in building No. 5. The plant is adequate and, while most of the radiators are old type pipe columns radiators, they are generally in good repair and adequate for all needs.

Plans have been made for extending this service to the barn and

[illegible]

[illegible]

(d) [illegible]

The following table shows the report returned by the station for the [illegible] 1929, 1930 and [illegible] 1931 [illegible] Dec. 31, for [illegible] [illegible].

[illegible]	1929	1930	1931	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

(e) [illegible]

[illegible]

(f) [illegible]

[illegible]

discontinue heating that by stove as at present. The lodge house No. 4 is heated by a stove and, as the building is small, the service cannot profitably be improved upon.

The main building No. 1 is the only one having ventilating facilities and that is through registers into chimney flues, which is satisfactory for present needs as the rooms have high ceilings and are light and airy.

The power plant is well arranged and adequate for all probable needs, but needs new condensation return tank and traps for taking care of returns from radiator system. A sidewalk lift should be installed in the present pit where ashes are now hoisted by block and tackle.

There is one passenger elevator with landing at all floors and one dumb waiter connecting the kitchen on first floor dining room on second floor and serving table on the third floor, both of the hydraulic plunger type, manufactured by the Portland Co., which are satisfactory and ample.

(36) Illumination.

All buildings except No. 4, the Lodge, and No. 6, store building, are lighted by electricity supplemented by gas, both supplied under contract with a local company. Building No. 4 is lighted with oil lamps and building No. 6 is not lighted. Facilities are adequate.

(37) Decoration.

All the plastered walls in building No. 1 have been painted and, with a few exceptions, noted hereafter, are in very good state of repair, but all need repainting.

The colors are generally sidewalls, deep buff with cream ceilings. The woodwork generally throughout the building needs repainting.

When painting is authorized, the colors should be specified in accordance with definite recommendations for all hospital work.

(38) Telephone and Call Systems.

An adequate intercommunicating system is installed in the main building connecting various parts of the building and the outbuildings. One city telephone is installed in Pharmacist's Office.

There is no means of calling night attendant, as there is only one nurse on duty at night. A silent call system with electrical annunciator is needed to connect with each bed.

(39) Ice and Refrigeration Facilities.

The only provision for ice in two old worn out refrigerators which need replacing at once.

[illegible]

A refrigerating system should be installed in the basement.

(40) Water Supply and Fire Protection.

Water is supplied from city mains in High Street by 6 inch cast iron connection to main building, with smaller branches to other buildings. There is one hydrant (City type) on this main in front of main building and a city hydrant in High Street, 800 feet from building.

Pressure is 25 pounds. Water for service purposes is pumped to two cast iron tanks in attic, 1,500 gallons each, which give adequate supply and pressure. The character of the water is excellent.

Water for fire purposes is supplied through 1,500 gallon duplex pump located in basement, connecting with one 4 inch stand pipe in main building.

Hose racks with 2½ inch hose and nozzles are provided on each floor and basement. Hose in basement is long enough to reach outbuildings. No wheel hose reels are provided and none are needed.

Chemical fire extinguishers are placed in stable basement, each set of quarters and on each floor of the hospital portion of main building. Two additional extinguishers, 3 gallon Underwriter type, are needed for laundry and isolation building. A hose rack and 50 feet 1½ inch linen hose and nozzle should be placed in isolation building and connected to pipe line now in building giving city pressure.

Facilities are in good condition and, with exceptions noted, are adequate.

(41) Fire Alarm System.

Station has Gamewell signal system operated from one station only in Surgeon's Office ringing, simultaneously, gongs on each floor and basement of main building and in stable and laundry. Fire drills are held weekly. Facilities are adequate.

(42) Sewer and Other Drainage.

All sewerage is discharged into city sewer on High Street through 6 inch main. Part of the storm water enters this sewer. An 8 inch storm drain in rear of main building takes boiler blow-off and certain downspouts and discharges on side hill to north.

(43) Streets, Roads, Walks, Fences and Grounds.

A macadam road leads from main entrance on High Street to each side of the main building and to the other buildings. In general it is in good condition and needs no repairs at present.

There is a vitrified brick pavement in the rear of main building

A satisfactory water supply should be installed in the basement.

(40) Water Supply and Fire Protection.

There is sufficient water pressure in this district to supply a fire main system. Fire hydrants, in water pressure, are located throughout the district. Water is now furnished by the Kamloops City Water Works on pipe mains of sufficient capacity and a city hydrant on High Street, 300 feet from building.

Pressure is 75 pounds. Water for domestic purposes is pumped to the roof tank from mains in alley, 6 feet below street level, giving ample pressure. The distribution of the water is well laid.

Water for fire purposes is supplied through a 6" main giving ample pressure and leaving no deficiency, connecting with small hose when used in fire buildings.

Fire stairs will and have not been provided in case of fire and emergency. There is however, ample room to erect installations. Fire hose hose racks are provided and hose are racked.

Internal hose installations are where is adequate capacity, but not of sufficient capacity and on each floor of the building portion of hose buildings. The additional equipment, 1 gallon fire extinguisher, one hand, for laundry and janitor's building. 2 hose wide and 1" long of hose. Hose racks should be placed in isolation building and connected to fire hose as is indicated clearly after inspection.

Facilities are in good condition and, with some improvements, are adequate.

(41) Fire Alarm System.

Provided the Kamloops signal system connected from the nearest alarm box in the district. Street alarm boxes are approximately 300 feet apart. Fire alarm box must of such building and in working order. Fire drills are held weekly. Facilities are adequate.

(42) Danger in Other Buildings.

The danger is in adjacent lots with frame buildings on High Street. Should a fire occur. There is also some danger from adjacent lumber. In a test among other on area of each building where lumber, and metals transmitted and conductors on main and in sewer.

(43) Exterior Exits, Stairs, Fire Escapes and Ladders.

A passage from lower floors from main entrance on High Street to back exit of the main building and to the lower building. In general it is of fire conditions and hence no fire escape or ladders.

There is a satisfactory main passage by the point of lower building.

in good condition. No repairs are needed.

A slate flagstone walk extends from main entrance of Hospital to near main gate. Needs relaying but otherwise is in good condition. There is a small amount of concrete, brick and gravel sidewalks in good condition. Walks are adequate.

The entire property with exception of approach to Broadway is enclosed with woven wire fence in good condition. Approach to Broadway has iron fence. This needs painting. This entrance is for pedestrians only. Main entrance on High Street has iron grill gates in good condition but in need of painting.

The grounds in general are well kept and the appearance is excellent. The old cemetery in the northwest corner of the reservation looks unkempt. Headstones have fallen down and the place is overgrown with bushes. Although this cemetery is not now used, it is desirable to enclose it with a fence and keep it in a more presentable condition.

(44) Wharves, Sea Walls, Etc.

None. No waterfront. See Section I, Par. 5.

(45) Live Stock, Vehicles, Etc.

Station possesses two horses (one condemned), one two-horse ambulance, one depot wagon, one express wagon, one sleigh, one dump cart, one horse lawn mower, one push cart, miscellaneous tools, etc.

Sleigh and lawn mower are worn out. A new lawn mower is needed. A sleigh is not required. Condemned horse should be disposed of. One horse is sufficient for station needs as ambulance service should be secured under contract.

(46) Personnel.

Attached to the station there is one Surgeon in charge, one Passed Assistant Surgeon and two Interns on duty at the hospital, and one Pharmacist and twenty-three attendants classed as follows:- 1 engineer, 2 firemen, 3 cooks, 5 day nurses, 1 night nurse, 2 laundrymen, 3 orderlies, 1 driver, 2 hallmen, 1 yardman, 1 watchman, and 1 gateman.

There is an acting assistant surgeon in the out-patient office of the service, No. 287 Atlantic Avenue.

One additional Pharmacist is needed here or a competent clerk, in order to relieve the Pharmacist now on duty from so much clerical work and also enable him to better supervise the duties of the attendants in keeping the hospital clean and in good order.

(47) Records.

The records of the Service are properly kept with the exception of

the clinical records which are very brief and incomplete.

(48) Books.

The medical books in the station library are old and, with a few exceptions, out of date.

(49) Purchase of Supplies.

Subsistence is delivered daily, except ice, and is now purchased on accepted proposal, without formal contract, obtained at three months intervals. The experience of the officers on duty here is that such a system possesses no advantage over the yearly contract formerly in use and greatly increases the clerical work of the station.

APPENDIX A

Marine Hospital at Boston, Mass.

Appropriation for Repairs & Preservation of Public Buildings.

* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
	Second Floor.	
	Smoking room. Paint woodwork and repair door check.	$15.00
	Repair speaking tube in hall.	1.00
	Dining room. New floor, 1,160 square feet.	116.00
	" " Paint wood and plaster work.	75.00
	First Floor.	
	Reception room. New floor, 306 square feet at 10¢	30.00
	Dispensary. Smooth oak floor and wax	25.00
	Kitchen. New floor, 600 square feet.	60.00
	Paint wood and plaster. 1 new lock.	40.00
	Rear entrance hall. Renew marble base.	3.00
	P. A. Surgeon's Quarters. Remove present toilet room to new location in hall and place non-conducting cover on pipes in present bath from patients toilet above.	600.00
	New floor in maid's room, 146 square feet.	15.00
	Replace missing door in dining room.	15.00
	Minor plaster repairs and paint quarters throughout .	350.00
	T O T A L - - - - -	$1345.00

APPENDIX A (Cont.)

Marine Hospital at Boston, Mass.

Appropriation for Repairs & Preservation of Public Buildings.

* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
	Third Floor Main Bldg.	
	Repair and paint dutch door.	$15.00
	Repair and paint veranda roof over Surgeon's quarters.	20.00
	Clean and paint all interior wood trim.	250.00
	Paint all iron work of main stairs and elevator enclosure, all floors.	150.00
	Smoking room. Paint trim and plaster.	30.00
	Townsend Ward. New floor.	90.00
	Austin Ward. New floor.	51.00
	New roof on rear veranda.	100.00
	Copper gutter on boiler house.	150.00
	Wood shed. Repairing roof and painting bldg.	25.00
	Barn. Two ventilators in manure pit.	20.00
	New wood floor in stable only.	75.00
	New roof on barn.	200.00
35	Boiler house. Lift for ashes.	600.00
	Copper gutters and downspouts.	300.00
	Extend passage and ash lift pit.	200.00
	Ingalls Ward. Patch plaster at steam pipes and paint same.	8.00
	Fasten loose base mould.	1.00
	Loring Ward. Repair floor.	20.00
	T O T A L - - - - - -	$2308.00

[illegible]

APPENDIX A (Cont.)

Marine Hospital at Boston, Mass.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
13	Building No. 8. Changes in two rooms for installing steam disinfector in this building.	$250.00
25	New syphilitic toilet room on third floor of Building No. 1.	350.00
9	Two new partitions in Hamilton Ward, fourth floor of Building No. 1 and closing up door.	150.00
18	Remodelling operating suite on second floor of Building No. 1.	800.00
19	Repainting and arranging X-Ray room fourth floor of Building No. 1.	300.00
22	Make window opening in room on second floor of Building No. 1 into 3 x 6 door.	35.00
	T O T A L - - - - - -	$1885.00

APPENDIX A (Cont.)

Marine Hospital at Boston, Mass.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
29	Isolation Building. Patching and painting plaster	$132.00
	Painting floors.	30.00
28	Necropsy. Screen door.	12.00
17	Laundry. Repair and paint plaster in toilet	18.00
	and entrance hall. Repair cement base entrance hall.	6.00
	Repair leak in roof and gutters.	50.00
1	Lodge Building. General overhauling and painting.	175.00
	Fourth Floor Main Bldg.	
1	Resolder tin roof and repair cupola.	75.00
	Hinged sash in Pharmacist's quarters and steps to veranda.	15.00
	Hall. Paint plaster and woodwork.	75.00
	Mess Hall. Varnish base and paint wood trim and plaster.	65.00
	Night watchman's room. Paint trim and plaster.	10.00
	Ambulance driver's room. Paint.	15.00
	Attendants' room. Paint.	15.00
	Pharmacist's storeroom. Step crack at window.	5.00
	South veranda roof. Repairs and painting.	120.00
	Repair broken window moulding.	15.00
	Repair, clean and paint all exterior iron work.	650.00
	T O T A L - - - - - -	$1469.00

APPENDIX A (Cont.)

Marine Hospital at Boston, Mass.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
38	Bedside Call system.	$1200.00
40	Two chemical extinguishers, one hose rack and piping connections.	90.00
43	Relaying flag walk, painting entrance gates and fence and new fence at cemetery.	500.00
	T O T A L - - - - - - - -	$1790.00

GRAND TOTAL OF "A"----------$8,789.00

APPENDIX B

Marine Hospital at Boston, Mass.

Appropriation for Mechanical & Electrical Equipment.
* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
25	Two laundry tubs and one new sink in Pharmacist's quarters.	$50.00
25	Replace cracked closet, fourth floor toilet.	20.00
39	Refrigerating and ice water system in basement, space provided.	3000.00
25	Toilet second floor. Replace broken urinal.	20.00
25	1 shower, 1 closet, 1 urinal, 2 lavatories, for syphilitic toilet, third floor, Bldg. No. 1.	600.00
14	Steam connections to sterilizer.	50.00
35	Extend steam heating service to barn.	150.00
35	Install sidewalk lift for ashes.	300.00
25	Changing location of plumbing fixtures in Passed Assistant Surgeon's quarters.	400.00
36	Extending electric high wires to Bldg. No. 4.	30.00
18	Wash up sinks in remodelled operating suite.	160.00
35	New return tank for steam returns	50.00
35	New steam trap to replace broken one.	20.00
	T O T A L - - -	$4870.00

lub

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[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
38	2 cowpeas, 1 [illegible], 2 yellow, 2 [illegible].	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
23	[illegible] condition of [illegible]	[illegible]
[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
55	[illegible]	[illegible]
	T O T A L - - -	[illegible]

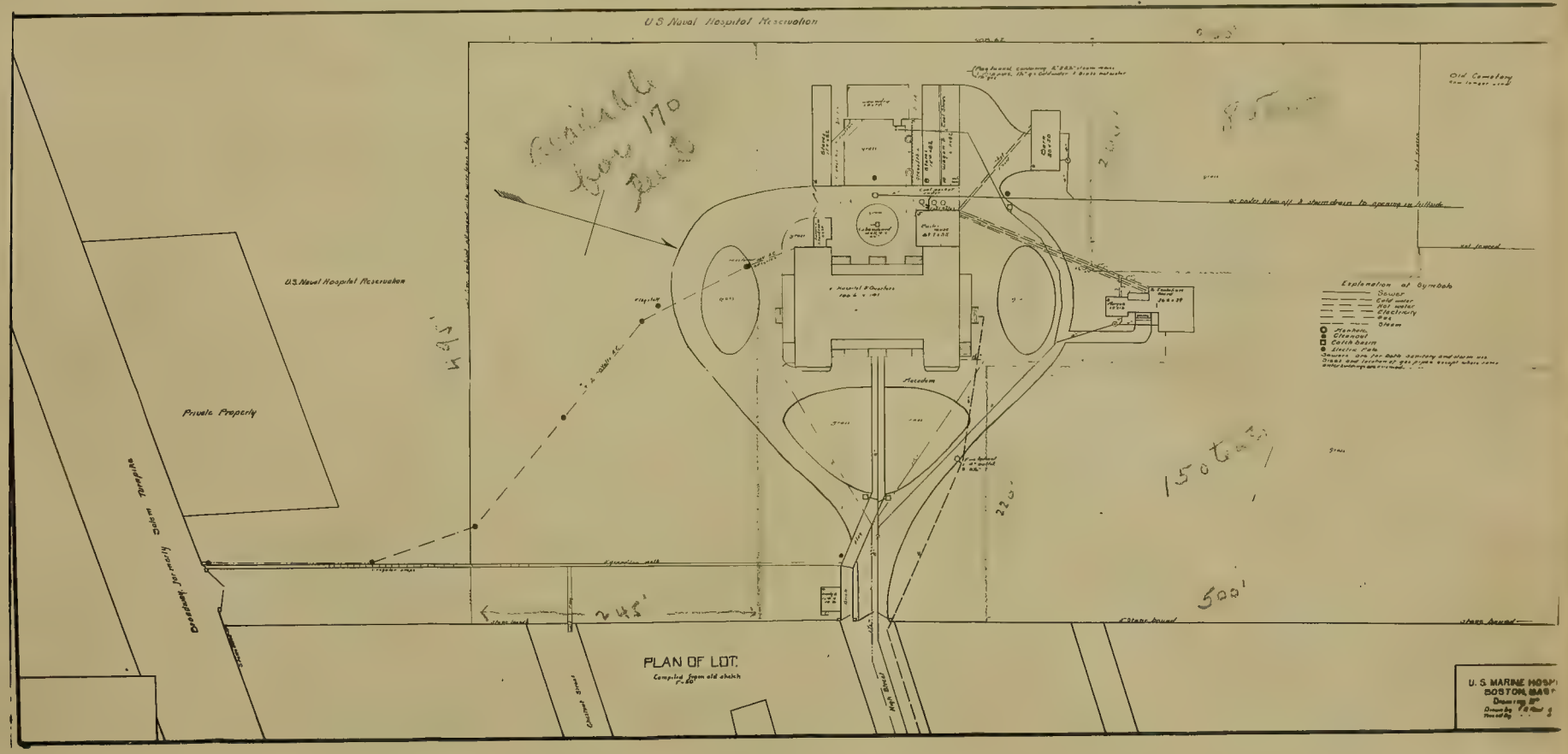
APPENDIX D

Marine Hospital at Boston, Mass.

Administrative Equipment.
* * * * * * * *

ADMINISTRATIVE equipment required.
(See administrative sheet attached to this report.)

Paragraph of report.	ITEMS	Estimated Cost.
30	Office (out-patient)	$280.00
2 & 3	Office (hospital)	180.00
22	Wards	533.00
18	Operating room	174.25
4	Examining room	25.00
20	Laboratory	60.00
19	X-Ray	73.90
5	Kitchen, etc.	400.00
10	Dining room	634.20
8	Officer's quarters	380.00
9	Attendants' quarters	875.00
14	Steam sterilizer	1400.00
15	Incinerator and garbage burner.	300.00
27	84" mangle	450.00
	Collar and shirt machine	200.00
	12 laundry tote baskets	50.00
45	One horse lawn mower	125.00
	12 ash cans	35.00
	T O T A L - - - - - - - - -	$6234.35


U.S. Naval Hospital Reservation
U.S. Naval Hospital Reservation
Private Property
Old Cemetery
Explanation of Symbols
Cold water
Hot water
Electricity
Gas
Steam
Flushing
Cleanout
Catch basin
Electric Pole
Flagstaff
Flagstone
245'
500'
150'
220'
PLAN OF LOT.
U. S. MARINE HOSP
BOSTON, MASS

PLANS OF U.S. MARINE HOSPITAL

BOSTON, MASS.

MAIN BUILDING FRONT.

MAIN BUILDING.

LAUNDRY.

STOREHOUSE No.

STOREHOUSE No.

NECROPSY BLDG.

ISOLATION HOSPITAL.

[illegible]

· VIEWS · OF ·
· U · S · MARINE · HOSPITAL ·

· BOSTON · MASS ·

· LODGE · AT · GATE ·

· BARN ·

· COAL · SHED ·

· DAMAGED · ROOF · B'LD'G No. 1 ·

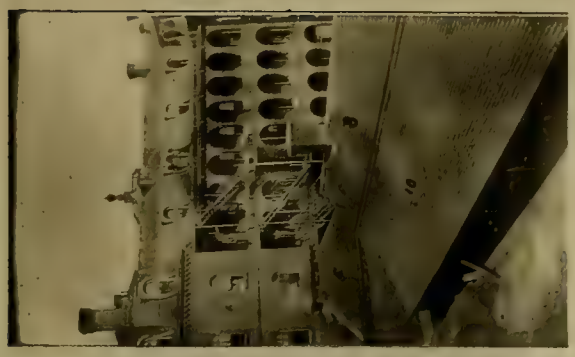
ENTRANCE · GATE · PEDESTRIAN ·

· CEMETERY ·

· WARD · ROOM ·

· VIEWS · OF ·
· U·S·MARINE · HOSPITAL ·

· BOSTON · MASS ·



· FIRE-ESCAPES · BUILDING · Nº 1 ·

· PART · OF · LAWNS ·

· LEWIS · WHARF · BUILDINGS ·

· LEWIS · WHARF · BUILDINGS ·

· LEWIS · WHARF · DOCK ·

· LEWIS · WHARF · COAL · POCKET ·

· [illegible] · OF · WHARF

JTC

November 30, 1915.

Medical Officer in Charge,
U. S. Marine Hospital,
Boston, Mass.

Sir:

There is inclosed herewith copy of an indorsement to the Supervising Architect, Treasury Department, of even date, requesting that you be authorized to obtain proposals for making the changes suggested in your letter of the 25th instant with the exception of sealing up the doorway leading to the main hall, 3rd floor.

The isolation ward should not be opened unless it is absolutely necessary, on account of the increased expense for heat and light.

By direction of the Surgeon General.

Respectfully,

(Signed) W. G. Stimpson.
Assistant Surgeon General.

1 Inclosure.

JTC

November 30, 1915.

Respectfully referred to the Supervising Architect, Treasury Department, with the request that the medical officer in charge (custodian) of the U. S. Marine Hospital at Boston (Chelsea), Mass., be authorized to obtain proposals for making the changes suggested in his letter of the 25th instant, with the exception of sealing up the doorway leading to the main hall, 3rd floor.

(Signed) Rupert Blue.

Surgeon General.

JTC

September 22, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Boston, Mass., except, in my opinion, officers attached to this station should have quarters on the reservation as it is impracticable to permit these officers to live in private quarters in the city as suggested on page four of this report.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

BUFFALO, NEW YORK.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

E.V.PERRY.
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
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GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

U. S. Marine Hospital, Buffalo, N. Y.

Report of examination made November 1914, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The hospital reservation is located on Main Street, between the Providence Retreat and the Deaf and Dumb Institute, consists of about three and a half acres of land, is high, well drained and with good sewer connections.

The reservation and the hospital are pleasantly situated in what may be called the residential section of Buffalo, and there is sufficient surrounding space on each side to secure fresh air and sunshine. The erection of manufacturing plants in the rear of the reservation on the east and northeast boundaries threatens to introduce a disturbing element, in the nature of coal smoke generated by them and blown over the building and grounds when the wind is from those directions.

A good car service passes in front of the hospital on Main Street and the reservation is distant about three and a half miles from the City Hall of Buffalo.

The hospital building is constructed of plain brick, with limestone trimmings, is of block plan, consists of an excellent basement, three stories and a finished attic.

(2) History

Previous to 1909, sick and disabled seamen at the port of Buffalo were cared for by the Service by contract with local hospitals, for ward rooms, subsistence, medicines and nursings, and the medical attendance was furnished by a medical officer of the Service.

On March 24, 1902, an act was passed by Congress to select a site and build a marine hospital at Buffalo and $125,000.00 was appropriated for this purpose.

On February 17th, 1903 a commission was appointed to choose a site and after viewing various lots offered for sale in Buffalo, a plot of ground about three and a half acres in extent and situated on the east side of Main Street between the Providence Retreat and the Deaf and Dumb Institute and owned by the Sisters in charge of the latter institution wasrecommended for purchase for the sum of $22,000.00. This purchase was completed during that year.

In July 1905 proposals for the erection of a suitable building were invited by the Department, but as the proposals received were in excess of the appropriation available for the erection of the building, all were rejected.

New plans and specifications were prepared by the Supervising Architect and proposals solicited in April 1908.

U. S. Marine Hospital, Buffalo, N. Y.

Report of examination made November 1919, with recommendations as to policy to be pursued.

I

GENERAL CHARACTERISTICS.

(1) Location.

The hospital reservation is located on Main Street, between the Niagara Herald and the Niagara Hotel buildings, consists of about three and a half acres of land, is high, well drained and with good sewer connections.

The reservation and the hospital are pleasantly situated in what may be called the residential section of Buffalo, and there is realizing increasing space on each side to secure fresh air and sunshine. The situation of manufacturing plants in the rear of the reservation on the west and northeast boundaries therefore is instrumental a disturbing element in the matter of coal smoke generated by them and blown over the building and grounds when the wind is from those directions.

A good car service passes in front of the hospital on Main Street and the reservation is distant about three and a half miles from the City Hall of Buffalo.

The hospital building is constructed of plain brick, with limestone trimmings, is of flat plan, consists of an excellent basement, three stories and a finished attic.

(2) History

Previous to 1906, risk and trouble & expense at the port of Buffalo were saved for by the Service by contract with local hospitals, for ward rooms, substitutes, medicines and surgery, and the medical attendance was furnished by a medical officer of the Service.

On March 24, 1906, an act was passed by Congress to select a site and build a marine hospital at Buffalo and $125,000.00 was appropriated for this purpose.

On February 17th, 1908 a commission was appointed to choose a site and after trading various lots offered for sale in Buffalo, a plot of ground about three and a half acres in extent and situated on the east side of Main Street between the Freyldinne Hotel and the Niagara Hotel and Hamilton was owned by the Misters in charge of the Lower Institution recommended for purchase for the sum of $42,000.00. This purchase was completed during that year.

In July 1910 proposals for the erection of a suitable building were invited by the Department, but as the proposals received were in excess of the appropriation available for the erection of the building, all were rejected.

New plans and specifications were prepared by the Treasury Architect and proposals solicited in April 1911.

The proposal of the Durolithic Company of Buffalo was accepted and a contract entered into for the construction of the hospital and grading the grounds for the sum of $84,354.00, the work to be completed on July 1,1909. The work was finished on the latter date, and as the furniture and necessary equipment had already been provided for at a cost of about $18,000.00 the building was opened for the reception of patients on September 1, 1909.

(3) Need for a Marine Hospital.

As there is a large and increasing lake commerce and sick and disabled lake sailors have for many years been cared for at the expense of the Government and Buffalo is one of the largest lake ports, it is probable that such relief will always be in demand, and now that a well equipped and suitable hospital has been provided, the service should be maintained and if necessity arrises therefor, should be enlarged to meet any demands.

(4) Adequacy of the Present Plant.

The hospital building is well constructed, well arranged, and adequate for the present needs, and if necessary can be readily expanded to meet any increasing demands by the erection of additional buildings.

Two small buildings are required, one for contagious cases and one for storage of yard tools, etc. Certain minor improvements recommended are described under SectionIII.

(5) Acquisition or Disposal of Land.

No additional land is needed. There is sufficient space on the reservation for the erection of additional buildings when needed. There is no land which can be disposed of.

(6) Future Development or Disposal of Plant.

With the addition of an isolation building recommended herein, it is very probable that the present plant is sufficient for all prospective needs. If however more space should be required, an additional wing or wings can be added at the rear to enlarge the present wards. Toilet and other facilities of the present building are adequate for at least 20 additional beds.

II
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * *

(1) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended. $3,075,00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended. 1,000.00

(3) Legislative Appropriation for New Construction.
(for details see appendix C)
Total estimated cost of work recommended. 3,600.00

The proposal of the Government Transport of Public for Jamaica was a
workers stationed here for the construction of our roadbed and provide
premises for the use of the W.T.D. was seen to be completed by July 1,
The work was finished on the Jubilee Bank, and the Department was
many employees had otherwise been provided for so as not to stop the
The building was opened for the reception of patients on February 1, 1920.

(2) Road Use & Motor Vehicle.

An Order in a large and interesting line concerning our road and
lake matters has for many years been under the supervision of the
Research and Statistics is the of the Internal Home Port, it is proposed that
more relief will accrue to the country, and we hope that a well matured and well-
made Regulations for Motor Vehicles, we perhaps should be satisfied and
necessary action therefor, should be adopted to have my Department.

(3) Advance of the Income Tax.

The Imperial Revenue is an important, well arranged, and
for the public weal, and if necessary and be really advantage is not any
increasing demand by the activity of additional institution.

For small buildings are required, and for emergency cases but are
storage of port tools, etc. Twelve other buildings recommended are
described under Building.

(4) Modification of Disposal of Land.

My activity also is needed. There is additional land on the
provision for the erection of additional buildings when needed. There is no
land which can be disposed of.

(5) Future Development of Kingston at Large.

From the activities of the Railway Building Commission, it is
very probable that the present plans is sufficient for all prospective needs.
If however more space should be required, an additional wing or wings can
be added at the rear to accommodate the present wards. Petty and other
offices of the present building are adequate but at least an overhead
beam.

II

Details of Expenditure Incurred Under Heads.

* * * * * * * * * * * * * * * * * *

(1) Expenditure for Service and Maintenance of Public Buildings.
(for details see appendix A)

Total authorized cost of work undertaken. £1,[illegible]

(2) Expenditure for Repairs and Extension of Public
Buildings (for details see appendix B)

Total expended cost of work undertaken. £[illegible]

(3) Expenditure for Water Supplies.
(for details see appendix C)

Total authorized cost of work undertaken. £[illegible]

(4) Appropriations for Administrative Equipment.
(for details see appendix D)
Total estimated cost of items recommended. 3312.00

TOTAL $12,912.00

(5) Personnel.

Adequate.

III
Description of Plant and Immediate
Improvements recommended.

(1) Buildings in General.

Building No. 1:- The only one on the reservation. Brick superstructure, granite water table, with limestone belt courses at first and third story window sills, and lintles over windows. Basement and three stories in front, four stories in rear. Tin Roof. Plaster walls and ceiling, painted, pine base and trim, varnished. Floors in corridors and toilet rooms are terrazzo, with marble borders and base. Toilets have marble wainscot. Basement has cement floor. All other floors are rift hard pine. Steam heat, electricity and gas light. Floor area, 23,396 square feet. Condition good except settlement cracks in outside walls which should immediately be repaired.

(2) Offices.

Surgeon's office on first floor near main entrance is a large, well furnished room facing on Main Street, is well lighted and sufficiently equipped for all practical purposes.

Pharmacists office, directly opposite the Surgeon's office, is equipped with a Yawman and Erbe file system, is well lighted and suitably furnished, but a new carpet rug is required for this room.

(3) Visitor's Reception Room.

Is located on the east side of the first floor adjoining the main stairway, is properly furnished and suitable for the purpose.

(4) Examining Room.

There is no special room for this purpose. The Surgeons or pharmacists office aand the surgical dressing room on the third floor being used when necessary.

(5) Kitchen and Diet Kitchens.

The kitchen is located on the west side of the third floor about the middle of the building. It is furnished with a coal and also a gas range, in which illuminating gas is used, boiler, tea and coffee urns, etc. Smoke hoods placed over both ranges are required. An electric dumb waiter run-

ning from the basement opens into the kitchen and is used to convey supplies thereto. A gas burning incinerator is placed in the hall adjoining this room, but is not now used for the incineration of garbage, only soiled surgical dressings being destroyed therein. The location of the kitchen on the third floor of the hospital seems to be a satisfactory arrangement for this building. A steam table is needed. The old tea and coffee urns are not now used and should be removed and disposed of. There are no diet kitchens. One can be provided by converting the room on the second floor adjoining the south ward into a diet kitchen by installing a door between it and the patients dining room so as to afford access to the dumb waiter station in that room which connects with the kitchen. This diet kitchen would for present capacity of the building have to serve both wards on this floor, which, while not ideal, would be a vast improvement over present conditions.

Pantry and Food Storage.

A large pantry which adjoins the kitchen between it and the attendants dining room and shelving placed at one end of the kitchen and two refrigerators are used for food storage purposes and are sufficient for present needs.

(7) Store Rooms.

Store rooms for general supplies (expendable and non-expendable) and medical and hospital stores and glass room are located in the basement and are ample for all needs.

(8) Quarters for officers.

There are no quarters at this station except for the Pharmacist, and Internes. The medical officer in charge received commutation and lives off the reservation, but in the present instance just across the street from the hospital.

Pharmacists quarters are located in the east wing on the first floor and consist of dining room, sitting room, kitchen, two bedrooms and a bath and toilet room. They are pleasantly located, well furnished and very desirable.

Internes quarters consist of one large room with adjoining bath room and toilet and a large clothes closet, are comfortably furnished and suitable.

(9) Quarters for Attendants.

Attendants are quartered on the third floor and in two rooms in the finished part of the fourth story and have a separate toilet and shower bath. Their quarters are comfortably furnished and satisfactory.

(10) Patients Dining Room.

Is on the second floor on the west side opposite the stairway. It is sufficiently furnished, faces on Main Street and has the dumb waiter leading from the kitchen and basement conveniently placed in one corner of the room.

(11) Internes and Officers Dining Room.

There is no special room for this purpose. A portion of the main hall on the north side of the first floor is screened off by a common cotton screen and used as a dining room for internes. If continued for this purpose a glazed wood partition with a door and transom should be placed across the hall.

(12) Attendants Dining Room.

This room is located in the south west corner of the third floor, is convenient to the kitchen, is sufficiently furnished and suitable.

(13) Recreation and Smoking Room.

There is no room for this purpose, except the large smoking room on the east side of the second floor, adjoining the stairway and elevator. It has served as a recreation room since the hospital was opened and a special room is not required.

(14) Disinfecting Facilities.

There is one 30" x 6'0" American Sterilizer with Formalin and ammonia attachment, which is adequate. This machine is installed in the boiler room and steam is supplied by a small upright high pressure boiler all of which, under present conditions is satisfactory.

(15) Incinerators.

A National Incinerator Company gas burning incinerator No. 1944., is installed in the hall on the third floor, with smoke connections to the same chimney as the kitchen ranges, provides for the incineration of bandanges, infected dressings, sputum, etc., and is inadequate and unsatisfactory for present needs. A water jacketed incinerator is recommended to be installed in the boiler room.

(16) Disposal of Soiled Linen.

All soiled linen is removed from the wards and rooms in sacks, which are suspended on a special circular holder until filled, and all infected linen and clothing is soaked in 5% carbolic solution and then disinfected by steam in the steam sterilizer in the basement before going to the laundry. The laundry work is done outside by yearly contract.

(17) Laundry Facilities.

There are no laundry facilities. Laundry work is done by contract, which is satisfactory and economical.

(18) Operating and Surgical Dressing Room Facilities.

The surgical division is placed in the north side of the third floor and entirely separated from the rest of this floor by partitions and door. It consists of a large operating room an etherizing and sterilizing room, a ward of seven beds for post operative cases a surgical dressing room, a toilet with shower, closets and sinks and a large closet for surgical

dressings and appliances. The operating and surgical dressing rooms are well equipped and furnished with hot and cold water sinks, with pedal and elbow attachments. The dressing and instrument sterilizer in this division is considered too small for present needs and the recommendation is made that it be removed to the surgical dressing room in the city office of the service and replaced by a larger apparatus and a utensil sterilizer added. Some miscellaneous instruments are also required.

(19) X-Ray Facilities.

This room is poorly equipped. It contains an old Scheidel Coil which is out of date and unserviceable and a portable Scheidel Western X-Ray apparatus which is in bad repair and unserviceable. The old apparatus should be disposed of at auction to the highest bidder, and the portable apparatus repaired and put in serviceable condition.

Dark Room. A dark room is located next to the X-Ray room and is considered sufficient for all needs. As this room is quite large it is proposed to partition off a portion of it next to the corridor on the first floor and by placing a door leading to the corridor therein make a utensil room for mops, buckets, etc., to replace the room recently set apart for a record storage room.

(20) Laboratory.

This room is located in the north east corner of the first floor, adjoining the XOray and dark rooms, and is of ample size and sufficiently equipped for clinical work, but needs an analytical balance, and an automatic still.

(21) Dispensary.

Is located on the west side of the building opposite the Pharmacist's Office, is a large room, handsomely furnished with selected oak medicine cases, marble topped dispensing counter, shelf work, etc., and is ample for all needs.

(22) Wards for Seamen.

Second Floor. There are two wards on this floor one at each end of the building. Both wards are open on three sides and are light and airy. The normal capacity is 15 beds each, total 30, with a maximum of 34 beds.

Third Floor. There is one surgical ward on this floor, capacity 7 beds.

Fourth Floor. A room on this floor is used as a detention ward, capacity 2 beds. Tubercular cases are quartered here until they can be sent to Cleveland Hospital enroute for Fort Stanton. (See Isolation, Paragraph 29.)

(23) Quiet Wards.

There are no rooms specifically provided for this purpose. The room assigned to Officers of Revenue Cutter Service can be used for this purpose, as it is rarely needed for such officers. Facilities satisfactory for present needs.

(24) Ward for Revenue Cutter Officers.

One room, with separate toilet and bath room, is provided on the second floor. It will accommodate a maximum of 2 persons. Rarely used under present conditions. Facilities are adequate.

(25) Toilet Facilities.

The toilet facilities throughout the building are modern and ample in all respects, except that a toilet for syphilitic patients should be provided.

A syphilitic toilet should be build on the second floor by utilizing a portion of the over adequate smoking room, next the large ward, in the south end of the building and contain one shower bath, without dressing room. 1 closet, one urinal and one lavatory. This room would come immediately under a toilet on the third floor, where convenient connections to supply and waste pipes can be had. Entrance should be from the ward adjoining, The present large double window to be divided at the mullion line by the new partition.

(26) Portable Tubs.

There is one portable tub, with raising and lowering rack, in good order, and two portable tubs without racks, which are sufficient for all needs.

(27) Padded Cells.

There are no padded cells for the lodgment of alcoholics and insane patients, but there is a good restraint sheet on hand.

(28) Necropsy Facilities.

A large well equipped room in the basement supplies all needs, and is adequate and satisfactory.f

(29) Isolation Facilities.

There is no detached ward for contagious cases. A room on the 4th floor is set aside as a detention ward. Contagious cases, except pneumonia and typhoid fever are taken care of in city hospitals. For contagious diseases a one story brick building of 4 to 6 bed capacity, in one room for contagious cases and one room of the same size for T.B. patients. The end of the building devoted to T. B. patients should have a good veranda facing the south. This building could be heated by the present plant in the main building without overloading. This addition would overcome the present objectionable necessity of caring for these patients in the wards or rooms adjacent to non-contagious cases.

(30) Out Patients Office.

This is located in the Federal Building in Buffalo, convenient to the center of the city and the lake shipping and consists of one large room, divided into four small rooms by wooden partitions. These rooms are classed as follows: waiting room, two offices and a dispensary and dressing room.

These rooms are fully equipped for service and suitably furnished. A sterilizing apparatus is needed for the Surgical Dressing Room and a carpet rug and linoleum for one of the offices and the waiting room.

(31) Floor Space.

Total net floor space			Total net floor space for hospital uses	
Basement.	4658	Sq. Ft.	" " " " " living quarters	64%
1st floor.	4240	"	(except hall space.)	16%
2nd "	4760	"	" " " space for hall space.	
3rd "	4350	"	(including quarters)	20%
4th "	6610	"		100%
	18,618	"		
Total Hall Space	4,678	SQ.FT.		
T O T A L	23,296	"		

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 39 beds for seamen including 2 beds in the detention wards, and one bed for officers of the Revenue Cutter Service. The maximum capacity is 44 seamen and 2 officers.

On a normal basis each patient has 83 to 99 square feet of floor space and 790 to 1260 cubic feet of air space. There are no accommodations for patients outside the main building.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914, and also for the period from July 1st to October 31st for the calendar years 1913 and 1914.

	FISCAL YEARS			July 1st to Oct. 31st	
	1909	1913	1914	1913	1914
No.days hospital relief furnished.	6039	9996	7894	2904	2233
Daily average hospital patients.	16.5	27.4	21.6		
Total daily cost per hospital patient		2.37	2.60		
Number of hospital patients.	347	470	349		
Number of out patients	1424	1543	1608		

On November 16th, 1914, there were twenty-four patients of whom four were chronics.

The present hospital was opened September 1st, 1909. Prior to that time patients were treated in city hospitals.

The maximum daily number of patients from January 1912 to date was 45 in January 1913, minimum 8 in July 1914.

The number of days hospital relief furnished in 1914 was 21 percent greater than in 1909 but 21 percent less than in 1913. For the first four months of the fiscal year 1915 it has been 24 percent less than for the

same period of the preceding year. The number of out patients in 1914 has been 13% greater, and times treated 21% greater than five years ago.

(34) Ambulance Service.

Service is furnished by the Homeopathic Hospital at $5.00 per trip within the city limits and $7.00 per trip outside. The service is satisfactory and adequate.

(35) Heating Power Plant ad Ventilation.

The building is heated by direct steam radiation supplied from two Ideal horizontal boilers No. 3,000. Only one of these boilers being used at a time, even in the coldest weather. The direct radiation is supplemented by four indirect stacks, which are ample and the entire plant is very satisfactory and sufficient for future needs except there is no means of storing ashes and refuse pending removal by the city, with the result that ash and garbage cans must stand exposed which is unsightly. A one story brick shed building, 10 x 20 feet would supply this and the need for storage off yard tools, hose reels, etc.

The ventilating system is by natural draft through vent registers connected to vent stack and roof ventilator. The system is adequate and satisfactory.

(36) Illumination.

The building is illuminated by a gas and electric combination lighting system which is adequate. The fixtures in sick wards are not adapted to hospital requirements and could be profitably replaced by direct indirect lighting, particularly in ward and operating rooms. Wall fixtures in sick wards are not desireable and should be removed.

(37) Decoration.

The entire building is very satisfactorily decorated, the walls generally being light buff, ceilings cream, and wainscot in halls and corridors being in sage green. This combination of colors for the location and surroundings is very satisfactory and restful.

(38) Telephone and Call System.

There is an intercommunicating system of 12 stations (10 in use) connecting the various parts of the building. It was installed when the building was built and is not in good condition. It should be thoroughly overhauled. There is one direct connected city telephone (Bell System) and a separate telephone in out patients office in the city. An electrical watchman clock system is installed and is in good condition.

There is no bedside call system installed. Some type of call system is required.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant and none is needed. Artificial ice of good quality is delivered to the ice boxes and is satisfactory.

(40) Water system and Fire Protection.

Water is obtained from 16" city main in Main Street. The city supply is obtained from the lake and is of good quality. The water is not filtered by the city but is passed through two mechanical filters in the basement of the hospital. The pressure is about 25 pounds. The main to the hospital is 4 inch reduced to 3 inch where it enters the building on the front at the south end. There are two one way 2½ inch hydrants one in front and one in the rear of the building. Within the building there are 5 hose racks each with 75 feet of 2" linen hose, one in basement and one on each floor.

The station has no hose for the 2 outside fire hydrants.

Twelve chemical extinguishers of the three gallon Underwriter type are well distributed throughout the building, except that one of the three on the third floor should be placed in the Pharmacists quarters. There is a city fire hydrant directly in front of the hospital on Main Street and two others on the same street within a short distance. City fire engine house is three blocks away.

If the outbuilding recommended is constructed a wheel hose reel with 300 feet of 2½" fire hose and nozzles should be provided and stored therein.

(41) Fire Alarm System.

There is a gong in the corridor of the first floor which is struck by a hand. Drills are held weekly.

(42) Sewers and other Drainage.

Sewerage and storm water are taken care of in a combined system discharging through 8" terra cotta and cast iron pipe into 12" city sewer in Main Street. Facilities are adequate.

(43) Streets, Roads, Walks Fences and Grounds.

There is a macadam driveway with concrete gutter to the front of the hospital. This drive has two entrances on Main Street. The surface is somewhat loose, but otherwise in good condition.

A macadam driveway for supplies leads from Main Street to the rear of the building. The top surface needs repairs and concrete curbs should be provided. A connection is desirable between this drive on the north side of the building and the driveway in front.

There is a concrete sidewalk on one side of the driveway to main entrance with a branch to entrance of Pharmacists quarters. There is a cement sidewalk on Main Street front in good condition. Facilities are adequate.

If the out building recommended for isolation and other purposes is constructed a concrete walk will be required to connect it with the rear entrance of the hospital.

The property line between the hospital reservation and land of the Providence Retreat on the south side has an iron picket fence belonging to that institution.

The other boundaries are not fenced. Although a fence along the north and east boundaries may be desirable in the future there is no necessity for it at present and it is not recommended.

The land adjacent to the reservation on these boundaries is the property of the Deaf Mute Institute and there is no incentive to trespass. Permanent monuments should be erected to mark the Government property lines.

The frontage on Main Street West boundary should not be fenced.

The grounds are well kept and the appearance from the front is excellent. Garbage and ash cans and an ash pile are however exposed to view in the rear and dodnot present a pleasing appearance. There is however no place where they can be screened from view. The outbuilding recommended will obviate the difficulty.

(44) Wharves, Sea Walls, Etc.

None. No waterfront.

(45) Live Stock, Vehicles, and Equipment.

There is no livestock or vehicles. The station has hand lawn mowers, push cart, miscellaneous tools, etc. Facilities are adequate.

(46) Personnel.

There are on duty at this station, one commissioned officer in charge, 3 acting assistant surgeons, (2 engaged in immigration work) and one on duty at the city office of the Service. 2 Internes and one Pharmacist, and 11 attendants classed as follows: 1 engineer, 1 cook, 1 clerk, 2 nurses, and one night nurse and watchman, 1 assistant cook, 1 fireman, 2 hallmen and 1 outman.

This force is considered sufficient for the present needs of the hospital.

(47) Records.

The records of the station including the clinical records are properly kept and up to date.

(48) Books.

There are a few modern medical books in the station library, but the majority of them are old and out of date.

(49) Purchase of Supplies.

Supplies are purchased on yearly contract after advertisement and proposal and the system is considered satisfactory, but advantage could be taken of market fluctuations if purchases were made in open market, without formal proposal.

The great [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible]

APPENDIX A.

Marine Hospital at Buffalo, N. Y.

Appropriation for Repairs and Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report	ITEMS.	Estimated Cost.	
11.	Door in Patients dining room and diet kitchen	$ 75.00	
	Glazed wood paneled partition & door across main hall for Interns & Officers dining room.	75.00	
19.	Plastered partition in present dark room to form cleaning gear room and new door in present partition.	125.00	
25.	Syphilitic toilet room, partition etc.	200.00	X
1.	Repairing & stopping settlement cracks in superstructure.	400.00	X
38.	Repair to telephone system	300.00	X
	Bedside call system	800.00	
40.	Hose reel and hose	400.00	X
43.	Repairs to roads, gutters and walks, and boundary monuments.	700.00	
		$3,075.00	

all above work reported done by R & P. div. A.T.C. 7-26-16.

APPENDIX B.

Marine Hospital at Buffalo, N. Y.

Appropriation for Mechanical and Electrical Equipment.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report	ITEMS	Estimated Cost.
25.	Syphilitic Toilet Room Fixtures.	$1,000.00

APPENDIX C.

Marine Hospital at Buffalo, N. Y.

New Construction.

* * * * *

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of Report.	ITEMS	Estimated Cost.
29.	Isolation and tubercular patient building, leanto type.	$5,000.00
35	Building for yard tools etc.	600.00
	increase to provide for Fire House and etc. to 1200.00 Penny	
		$5,600.00

APPENDIX D.

Marine Hospital at Buffalo, N. Y.

Administrative Equipment.

* * * * * * *

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report	ITEMS	Estimated Cost.
30.	Office (out patients)	$ 251.00
2.	Office (hospital)	42.00
22.	Wards	926.00
18.	Operating & Surgical Dressing Rooms	1,180.00
20.	Laboratory	188.00
5.	Diet Kitchen	150.00
5.	Smoke hood over two ranges in 3rd story, to vent pipe above.	75.00
26.	Changing lighting fixtures in operating room and sick wards.	400.00
		$3,212.00

EXHIBIT B.

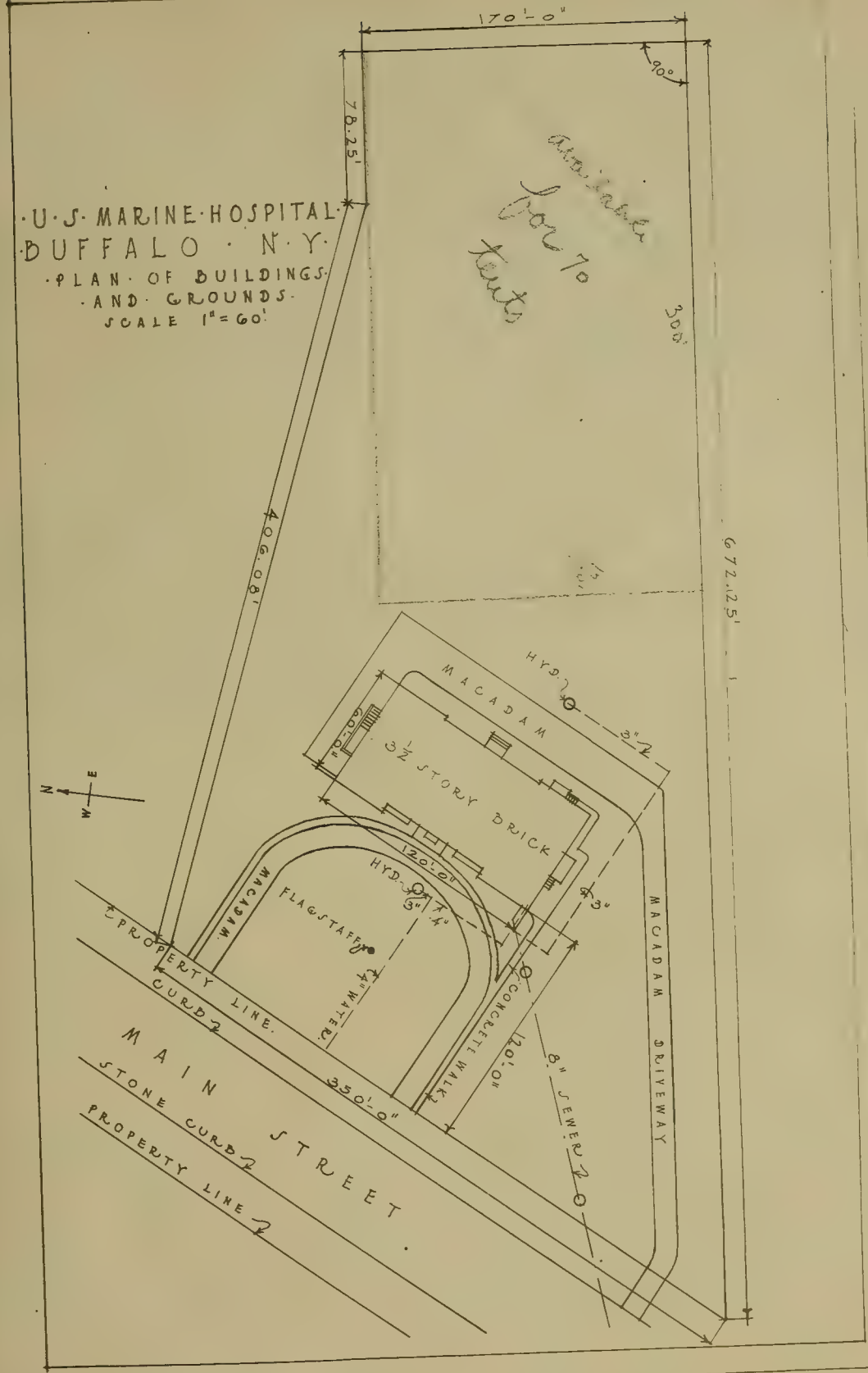
Bryce Hospital as Extended, G. F.

Administration Building.

* * * * * * *

[illegible] equipment which should be installed immediately.

Requisition of Number	Item	Estimated Price.
[illegible]	Office (two partners)	[illegible]
[illegible]	Office (hospital)	[illegible]
[illegible]	Safe	[illegible]
[illegible]	Dressing & surgical instruments [illegible]	[illegible]
[illegible]	Laundry	[illegible]
[illegible]	Gas Plant	[illegible]
[illegible]	Whole land area [illegible] in [illegible] years, [illegible] of [illegible] years [illegible].	[illegible]
[illegible]	Complete lighting plant in operation [illegible] [illegible] [illegible].	[illegible]
		[illegible]



Estimated tent capacity 70.

VIEWS
U·S·MARINE·HOSPITAL·

BUFFALO, NEW YORK.

GENERAL VIEW OF MARINE HOSPITAL

FRONT

REAR

JTC

September 22, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Buffalo, New York.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

2. History.
3. Need for a Marine Hospital.
4. Adequacy of Plant.
5. Acquisition or Disposal of Land.
6. Future Development or Disposal.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

CAIRO, ILLINOIS.

BY

D.A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N.V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A.L. PARSONS,
Civil Engineer, U. S. N.

14. Ambulance
Heating, Power

GENERAL INDEX

U. S. MARINE HOSPITAL, CAIRO, ILL.

Report of Inspection made December 1914, with Recommendations as to policy to be pursued.

I
GENERAL CONSIDERATIONS.

(1) Location.

The hospital reservation at Cairo, Illinois, consists of four and one quarter acres in the southwest part of the city, to the eastward, and northwest of the Mississippi levee. It is bounded on the north and east by Cedar Street, on the south and west by Jefferson Street and the track of the Mobile and Ohio Railroad. On the east by 10th Street and on the west by 13th Street.

The grounds present a pleasing appearance, are well turfed and kept, and a number of beautiful trees, shrubs and vines add to the attractiveness of the place. Roads and walks with substantial curbing surrounds and lead between the buildings and the reservation is inclosed on the Cedar Street and 13th Street sides by a substantial brick and cement wall surmounted by a handsome iron railing. Three gates, supported by substantial brick and cement posts, guard the 10th and Jefferson Streets sides of the reservation. A flag pole is placed in front of the Executive building. The hospital buildings, located near the center of the reservation, are composed of a pavilion group, consisting of a brick executive building, of two stories and basement, two pavilion wards, brick base and a one story structure with wide porches in the front and at the sides. A two story and basement brick building for laundry and heating apparatus, kitchen and attendants quarters. A surgeon's house of two stories, brick basement and wood superstructure. A stable building of one story, wooden structure, containing stable, carriage and necropsy room. and a small wooden building for the Kinjoun Francis Steam sterilizer.

(2) History.

There are no existing records to show when relief was given to rivermen at Cairo by the Government, but the contract system was in use in August 1865, the patients being cared for at the hospital of the Sisters of Charity and attended by a local physician.

In September 1878 the first regular officer of the service was detailed for duty here and established an office in the Custom House. This officer (Dr. Waldo) died from yellow fever in Cairo, in September 1879, and is buried in the National Cemetary at Mound City, Illinois.

The patients were cared for at the Sisters Hospital until March 1st, 1886.

An Act of Congress approved August 7, 1882, appropriated $60,000.00 for a Marine Hospital at Cairo, Illinois. A Commission was appointed to select a site in September 1882 and chose the property where the hospital is located. Condemnation proceedings were necessary as the owners would not sumbit a proposal. The ground consisting of 4½ acres was purchased for $1150.00.

The buildings were completed on November 8, 1884, and the Surgeon's house in 1885. The hospital was furnished and opened for the reception of patients on March 1, 1886.

Through the influence of some of the riverman and politicians the hospital was to be conducted by the Sisters of Charity under the direction of a medical officer of the service.

This arrangement was never satisfactory to the Department or the Service and was terminated by the former on June 26, 1888. The Service then assumed full control of the hospital management which has continued up to the present time.

(3) Need for a Marine Hospital.

There is little need of a Marine Hospital at this station at the present time. At times there are only two or three patients in the hospital and on the date of writing, December 6, 1914, there were only six patients located therein. The river commerce has diminished to such an extent that the maintenance of this hospital and the expense connected therewith does not seem justified.

To show how the number of patients has diminished in recent years, the number treated was 34% less in 1914 than in 1913, 54% less than in 1909, and 34% less for five months from July to November in 1914 than in 1913. The daily cost of each patient in 1912-13 was $6.55, and in 1913-14 $6.41 per day.

(4) Adequacy of Plant.

The plant is adequate for the small needs of the station, but owing to the expensive maintenance the hospital should be closed and local arrangements made with one of the city hospitals in Cairo for the care of the patients.

Cases requiring continued treatment can be transferred to the Marine Hospitals at St. Louis, Mo., or Evansville, Ind.

(5) Acquisition or Disposal of Land.

A continuation of a Marine Hospital at Cairo is not recommended and it should be closed. Value of reservation exclusive of buildings is estimated at $25,000.00. Value of buildings only, $3,000.00.

(6) Future Development or Disposal of Land.

There is at present no prospect of future developmentfor this station.

In lack of improved quarters I, Dr. Ecuador, superintendent the Quito Marine Hospital of Lisbon, Illinois. A Commission was appointed to select a site in Jefferson City and found the property where the hospital is located. Contracts for the purchase were signed on the second floor of the building. The Board consisting of all medical and professional men in the city, and the Superintendent of the Hospital.

The building was completed on November 9, 1934, and the Surgeon's house in 1935. The hospital was furnished and opened for the examination of patients on March 1, 1936.

Through the influence of some of the citizens our politicians the hospital was in be crowded by the citizens of Quito under the direction of a medical officer of the service.

This encouraged the power authority on the Department of the Interior and was instructed in the Bureau of Plan to, 1936. The Marine Hospital Unit control of the hospital investigation which has evolved up to the present time.

(2) Need for a Marine Hospital.

There is little need of a Marine Hospital at this station at the present time. It is true there are only two or three patients in the hospital and on the 15th of October, December 1, 1936, there were only one patients treated there. The city authorities are endeavoring to keep or retain that the existence of this hospital and the adjacent Industrial Hospital under some jurisdiction.

To date for the number of patients had the hospital in several years, the number treated was not less in this town in 1935, 201 here 1935 and 201 here for this month from July to December in the town in 1936. The daily avg of sick patients in 1935-36 was 16.6, due to 1936-37 to 20 day.

(3) Advantage of Plant.

The plant is adequate for the small amount of the training, but only is the expenditure authorized the hospital should be closed and the patients made to fit one of the City hospitals in Quito for the care of the patients.

Some hospitalization medical treatment can be furnished in the adjacent Hospital at St. Louis, Mo., or Evansville, Ind.

(4) Attitude of Personnel of Plant.

A co-ordination of a Marine Hospital at Quito is unnecessary and it should be closed. Time of personnel employed by Politicians in Washington of the, 1936. Time of patients only, 20,000.

(5) Future Availability of Personnel of Plant.

There is of present no prospect of future availability for Marine Hospital.

It should be closed until the demands of the Service require the reopening.

II

SUMMARY OF INDIAN DEPARTMENT RECOMMENDED.

* *

(1) Appropriation for Repairs and Preservation of Public Buildings
(for details see Appendix A)
Total estimated cost of work recommended $ 80.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see Appendix B)
Total estimated cost of work recommended 100.00

(3) Legislative Appropriation for New Construction
(for details see Appendix C)
Total cost of work recommended —.—

(4) Appropriations for Administrative Equipment
(for details see Appendix D)
Total estimated cost of items recommended 2,636.00

TOTAL $2,836.00

(5) Personnel.

Adequate.

III

DESCRIPTION OF PLANT AND INDIAN DEPARTMENT RECOMMENDED.

(1) Buildings in General.

Building No. 1, Administrative Building. Two story and basement, brick superstructure. Tin roof. Plastered walls and ceilings. First floor rooms painted, second floor rooms papered. Pine base and trim throughout the building painted. Basement has cement floors but no interior finish. Porcelain tile floor and base in operating and toilet room. Quartered oak in pharmacy. 3/4" D & M pine sleepers. Steam heat, gas and electric light. Floor area 5250 square feet. All papered walls should have paper removed and walls painted if station is to be kept open.

Building No. 2. Attendants' Quarters, Laundry, etc. One story and basement, brick superstructure. Tin roof. Cement floors in basement, all other floors D & M hard pine. All walls and ceilings are plastered, and painted. Pine base and trim throughout painted. Steam heat. Gas and electric light. Floor area 4,000 square feet.

Building No. 3. Disinfecting Building. One story wood frame on sills laid on ground. Shingled roof. Boards and battens exterior. No interior finish or paint. Plank floors. Steam heat. Electric light. Floor area 200 square feet.

Buildings Nos. 4 & 5. Hospital wards. One story wood frame on brick piers. Shingle roof, Clapboard exterior. Ward rooms have open truss roof. Plastered side walls only. All other rooms have plastered walls and ceilings, painted. Pine base and trim painted. Porcelain tile floors in toilet rooms. D & M hard pine floors elsewhere. Steam heat. Gas and Electric light. Floor area 3593 square feet each. There is a one room basement under building No. 4, with cement floor, but no finish.

Building No. 6. Barn and Necropsy. One story and loft wood frame on brick foundation. Clapboard exterior. Shingle roof. Necropsy room has plastered walls and ceilings, painted. Barn has D & M sheathed walls and ceilings, and plank floor in first story. Plank floor but no finish in loft. No heat. Electric light. Floor area 1760 square feet.

Building No. 7. Surgeon's residence. Two story wood frame with brick basement above ground. Clapboard exterior. Shingle roof. Basement has cement floor, but no interior finish. Walls and ceilings above basement are plastered and painted. Pine base and trim, painted. Floors 3¼" D & M pine, painted. A covered veranda extends across the front and two sides of the building, part of which is screened. Building has local steam heating plant. Gas and electric lights. Floor area 5964 square feet. Building generally in poor physical condition, but no specific repairs needed.

Building No. 8. Hen House. One story wood frame on the ground. Board and batten exterior shingle roof. 6" board floor. No interior finish. No heat. No light. Floor area 84 square feet. Should be removed as it is not used or needed.

(2) Offices.

Surgeon's Office.

Located on the west side of the first floor of executive building, is a fair sized room and fairly furnished. Two rugs are needed for this room.

Pharmacist's Office.

Located on the east side of the first floor of the executive building, is a counter part of the Surgeon's Office and sufficiently furnished.

(3) Visitors' Reception Room.

No special room for this purpose. Corridor of executive building is used for reception of visitors.

(4) Examining Room.

No special room. Examination of patients made in Surgeon's Office and surgical dressing room.

(5) Kitchen and Diet Kitchen.

The kitchen is located on the first floor of the laundry building. Is a good room with a good range and hood and is fairly equipped but new kitchen utensils will be needed, as those in use are badly worn. A small gas stove would be useful.

Diet Kitchen.

None. Food is carried from kitchen to wards in closed trays. No special method of heating food in wards. If hospital is continued a small gas range could be placed in ward dining room to serve this purpose.

(6) Pantry and Food Storage.

A large pantry adjoins the kitchen between it and the attendants dining room, is used for dishes, utensils and some kitchen stoves.

Subsistence Store Room.

Adjoins the attendants dining room on the first floor of the laundry building, is used for storage of subsistence supplies and hospital linen.

(7) Store rooms.

In the basement of the executive building are rooms for the storage of drugs, glass-ware, stationary and unserviceable property and in the basement of ward 2 is a room for storage of miscellaneous articles.

(8) Quarters for Officers.

Senior Surgeon's Quarters.

Located in a separate two story frame house with brick basement on the west side of the reservation. It contains twelve rooms. On the first floor are the parlor, library, bedroom, bathroom, dining room and kitchen. On the second story are three bedrooms, a bath room, a trunk room and a servant's bed room. There is a good basement, and under the kitchen and dining room is a small hand laundry and hot water heater. These quarters are not well furnished, the furniture and carpets being old and worn.

Pharmacist's Quarters.

Located on the second floor of the executive building, consists of five rooms, parlor, dining room, two bed rooms, kitchen and bath room. One room on this floor was formarly used as an Interne's room and is now unoccupied. The Pharmacist's quarters if continued would need two carpets, 1 refrigerator, a kitchen cabinet and new table dishes. The floors in these quarters have been badly cut up during installation of electrical conduits and should be repaired.

(9) Quarters for Attendants.

Two colored women, cook and laundress do not live on the reservation. Of the remaining seven attendants, six have quarters on the upper story of the laundry building and one in the nurses' room in ward A. The furniture in all of these rooms is old and much worn.

(10) Patients' Dining Room.

Located at the end of each ward. One for colored and one for white patients. If continued new tables and chairs and dishes would be needed.

(11) Interns' and Officers' Dining Room.

None.

(12) Attendants' Dining Room.

Located in the laundry building on the first floor and next to the kitchen. It is good sized room and the furniture is adequate.

(13) Recreation and Smoking Rooms.

These are placed at the south west end of each ward, are good sized rooms, but not well furnished. If hospital is continued, new tables and chairs will be needed.

(14) Disinfecting Facilities.

A Kinyoun Francis, two ended, steam sterilizer with formalin and ammonia attachment is located in building No. 3. It is supplied from the high pressure boiler in building No. 2. which also supplies steam for the laundry. The arrangement and condition of the apparatus is ample and satisfactory.

(15) Incinerators.

There are no incinerators and none are necessary. Bandages are burned under the heating boilers. House garbage is removed semi-weekly by the city. Ashes are removed gratuitously when desired.

(16) Disposal of Soiled Linen.

Removed from wards and rooms and placed in hampers in open air, soaked in solution of milk of lime, then dried and sent to the laundry. Infected linen, same process. As a routine matter, mattresses, blankets, pillows and clothing in use are sterilized in the Kinyoun Francis Sterilizer once a week.

(17) Laundry Facilities.

A well equipped steam laundry is located in the basement of building No. 2, consisting of 1 Troy Washer, 1 mangle and 1 shirt ironer, 1 Wilson Centrifugal Dryer, 1 O. & S. Vertical slide valve engine, 15 Horsepower, 1 four track steam drying room, heated from 1 Sad Iron Heater. All in good condition. There are in addition, two earthen ware laundry tubs and 1 ironing table, all of which is satisfactory and adequate.

(18) Operating and Surgical Dressing Room.

The operating room is located in the southwest corner of the first floor of the executive building. It has a dressing and instrument sterilizer, tables, instrument cases, etc. The dressing sterilizer is old and leaks. There are hot and cold water pipes in this room but no sink. If hospital is continued, this room should be provided with a proper sink with pedal or knee attachments and a new dressing sterilizer. The outfit of instruments is sufficient as the amount of surgery performed is not large.

The Surgical Dressing Room is located in one of the small rooms in the north end of Ward B. It is fairly furnished but needs two large irrigating jars.

(19) X-Ray Facilities.

Located in one of the small rooms in the north end of ward B, directly opposite the surgical dressing room. It has an old Otis and Clapp Static Machine which is out of date and useless. New outfit not needed. X-Ray work is contracted for at this station for the present year with Dr. Ray S. Burrowes, at the rate of $5.00 per case.

(20) Laboratory.

Located in one of the small rooms in the north end of ward A. It has a small equipment and clinical examinations are confined largely to urinary and sputum work. No new outfit needed at present.

(21) Dispensary.

Located on the first floor of the executive building, opposite the operating room, is fairly equipped and nothing is needed.

(22) Wards for Seamen.

There are two pavilion ward buildings, each with a main ward 72 feet long, with normal bed capacity of 15, maximum 19. Both wards are 28 feet wide, are open on both sides with verandas 6' wide. There is no ceiling whatever in either ward. One ward is used for colored and the other for white patients.

(23) Quiet Wards.

There are no wards specifically arranged for this purpose but each ward building has an unassigned room available for this purpose.

(24) Wards for Revenue Cutter Officers.

There are none provided and none are needed.

(25) Toilet Facilities.

The toilet facilities are ample and in good repair, except there should be a sink for washing instruments in the operating room, where hot and cold water faucets are now installed, sewer connection can be made to soil line in the adjoining washup room. There is also no toilet for syphilitics but under local conditions none are needed.

(26) Portable Tubs.

One old zinc tub painted with enamel and without rack on hand. Few cases of typhoid are received for treatment.

(27) Padded Cells.

None at this station. Humane restraint apparatus used in violent alcoholic and insane cases, until removed to proper asylum.

(28) Necropsy Facilities.

Ample necropsy facilities are afforded in the room for that purpose in

building #6 and are in good condition except for loose plastering which has been provided for in specifications on file in the Supervising Architect's office.

(29) Isolation Facilities.

There is no special building provided for this purpose. Contagious cases are sent to city institutions. In case it is necessary to isolate any particular case one of the small rooms in either of the two ward buildings is available. Facilities adequate for present conditions.

(30) Out Patients' Office.

No special office. Out patients are examined and treated at the hospital generally in the office of the Surgeon in charge.

(31) Floor Space.

In the hospital group proper, namely the executive building, two pavilion wards and the attendants' building, the total net floor space is as follows:

Basements. (Executive and Attendants' bldg. only)	2529	
First Floors.	9041	
Second Floors. (Executive & Attendants' Bldgs. only)	2546	
	14116	square feet.
Total Halls.	2340	" "
TOTAL	16456.	" "

In this group

The total net floor space for hospital uses is	69%
" " " " " " quarters (except hall space) is	17%
" " " " " " hall space (including quarters)	14%
	100%

The Surgeon has quarters in a separate building devoted entirely to this purpose. Total floor space is 5964 square feet.

(32) Bed Capacity and Space allowed.

The total normal capacity is 32 beds, maximum 42. On a normal basis each patient has 120 square feet of floor area and 1850 cubic feet of air space computed on a height of 15 feet to eaves. Wards areopen to roof.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by this station for the fiscal years 1909, 1913, 1914, and also for the period from July 1st to Nov. 30th for the calendar years 1913, 1914.

	Fiscal Years			July 1 to Nov. 30th.	
	1909	1913	1914	1913	1914
Number days hospital relief furnished	5062	3517	2320	1276	843
Daily average hospital patients.	13.9	9.7	6.4	----	----
Total daily cost per hospital patient	4.37	6.55	6.41	----	----
Number of hospital patients	273	182	129	----	----
Number of outside patients	417	569	522	----	----
Number of times treated	532	685	627	----	----

On December 5th there were 6 patients of whom 5 were chronics. Tubercular patients, none. Of the 6 patients, 5 were white and 1 colored. The maximum daily number in the hospital in the last ten years was about 27, minimum 2. The number of days hospital relief furnished in 1914 was 34% less than in 1913 and 54% less than in 1909. For the first five months of the present fiscal year, it has been 34% lessthan for the same period in the last year. The number of out patients has not varied materially for the last few years.

(34) Ambulance Service.

This station has a one horse ambulance in good condition. Facilities are adequate.

(35) Heating, Power Plant and Ventilation.

All buildings requiring heat are supplied by direct steam radiation from a low pressure heating plant in the basement of building #2, from 3 sectional C. I. Ideal heaters, operated at 5# pressure. The plant is adequate and needs no repairs, extentions or modifications. Power is supplied to the laundry engine and steam disinfector of building #2 from a donkey boiler of about 30 horsepower capacity, manufactured by Kellogg Macay Company, Chicago, Ill., installed in 1911, is in good condition. The stack connection to the chimney, originally designed for fireplaces in the building, is somewhat inadequate as is that of the central heating plant. If this station is kept open, these chimneys should be extended with steel sections. Ventilation generally is by means of windows and doors and is satisfactory.

(36) Illumination.

All buildings except that housing the steam disinfector are lighted by electricity and all except #3 and the barn are supplied with gas service which is used only when the electricity fails. The service is adequate but the fixtures in the wards should be changed from drop cords with plain bulbs, to semi-indirect fixtures, if the station is continued.

(37) Decoration.

The decoration generally is satisfactory except that provided for in specifications in the office, prepared by Mr. Fourchy.

(38) Telephone and Call Systems.

There is one direct connected city telephone in the executive building, Home Telephone Company. The station has an intercommunicating system connecting the executive building and various out buildings. Twelve stations, 8 connected. In good condition. There is also a call bell system with annunciator in the Pharmacist's Office and push buttons in wards and various buildings. A series of push buttons in the Pharmacist's Office connects with bells in the several buildings to locate employees, each person having their own signal. A portable watchman clock system is in use. Keys are permanently attached to the stations. Facilities adequate.

(39) Ice and Refrigerating Facilities.

Artificial ice is supplied to ice boxes which are old and need replacing with new ones if the station is continued. There is no refrigeration plant and none is needed.

(40) Water Supply and Fire Protection.

Water is obtained from 6" city main on Cedar Street, through 2" connection to executive building, thence to other buildings. The two 2 way fire hydrants on the reservation have direct 6" connection to city mains. There are four city fire hydrants on streets bordering on reservation. The source is river water. There are two filters recently installed by the hospital through which all the service water is passed. Pressure 50 to 65 pounds. In summer it sometimes gets as low as 30# at buildings and about 40# on hydrants. Character of water is fair. Various places in the town have artesian supply. There are three old brick cisterns originally used for storing rain water but now abandoned. The station has two 2 wheel hose reels with 200 feet of 2½" fire hose and nozzle on each. There are no hose reels within buildings. City has a fire department but no engine although the purchase of one is contemplated. There are 9 chemical fire extinguishers of the 3 gallon Underwriter type well distributed. Facilities adequate.

(41) Fire Alarm System.

The station has a fire bell in the rear of the executive building struck by hand. Drills are held weekly. City has fire department but there are no signal boxes near-by. Facilities adequate.

(42) Sewer and Other Drainage.

Storm water and sewerage is taken care of in a combined system and discharged through 10" vitrified pipe to 12" city sewer in Cedar Street. Branches lead to various buildings. System is in good condition and adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

An extensive system of macadam roads with concrete curbs lead from the various entrances to and around the buildings. In good condition and adequate. There are cement sidewalks along station boundaries on Cedar, 12th, and 10th Streets. Extensive cement walks within the grounds lead to various buildings. All in condition and adequate except for a few minor improvements covered by Inspector Fourchy's report. There is an iron picket fence on two foot brick wall, stucco finish, on Cedar Street and 12th Street with 4 carriage and 2 pedestrian entrances having iron gates and masonry posts. The other two boundaries are enclosed with wood post and wire fence and a similar fence separates a portion of the rear of the reservation into a stable yard. Fences are all in good condition and adequate.

The grounds are well laid out, are well kept, ornamental and present a pleasing appearance. There are a large number of shade trees in good condition.

(44) Wharves, Seawalls, etc.

None. No waterfront.

Artificial ice is supplied in the tanks using air dry and pure sulphur dioxide gas. Ice is in cylinders or blocks. There is no refrigerating plant to be seen in operation.

(40) **Bath Heater and Hot Water Installation.**

Heat is obtained from an oil burner in the boiler house, through a heat-exchanger. Water is stored in other buildings. Hot water is provided in the operation hand shower in a cubicle. The hot water is not fire hot, but still fairly quickly as somewhere in air which. There are other cubicles. There are the fitting immediately behind in the physical room. In winter it provides one line on 32F on Saturday and about 40 on Saturday. Temperature of water is from. Nothing shown in the room where obtained supply. There are three air bubble controls automatically when for activity only on but not when normal. The operation has 2 shows which from 40F light of 32F fire been not assists on work. There are on room which plant fitting. Oil in has a fire hydraulic jet on device attached the pressure of use is automatic. There are 3 shower in anti-scalding of the 2 prior thermostatic that well distributed. Health case supports.

(41) **Fire Alarm System.**

The station was a fire bell in the rear of the swimming building, about 30 feet. Points are bell weekly. Only one fire department but there are no signal boxes nearby. Telephone exchange.

(42) **Water and Sewage Installation.**

Fresh water and sewerage is from main and of a residual pressure and pressure tank by electric pump in the other. Water is by good workings and sewers.

(43) **Electric, Steam, Gas, Power and Steam.**

An automatic system of mounted steam with reserve main steam. The working pressure is not known for building. In good condition and main. There are general electric steam power connected to 3000. Electric power and main. Electric drives. Electric power and water connected to 3000. Oil for heating and electric and boilers. Fuel for heating and electric energy for a hot water injection. Water supply by Computer Department's report. There is the fire alarm system on the first main well. Water Tight. No single valve. Not fitted with a pressure and a pressure reducing valve. Special fire pump but pressure power. The fire hydrants are machines and no more fire. Not the fire from and a single fire hose. Thermal expansion a problem of the main in the temperature below a fire hose. Thermal expansion in good condition and reliable.

The sprinkler are well laid out, are well kept, reasonably and always a pressure automatic. There are a large number of sprinkler heads so that fire alarm.

(44) **Boiler Room.** etc.

None. No sprinkler.

(45) Live Stock, Vehicles etc.

There is a one horse ambulance, one lawn mower, and one light wagon in good condition, except wagon which is in bad condition. The station has one horse 22 years old, in good condition. Facilities adequate.

(46) Personnel.

There are on duty at this station, 1 Commissioned Officer, 1 Senior Surgeon, 1 Pharmacist and 9 attendants, classed as follows: 1 engineer, 1 nurse, 1 night watchman, two yardmen, 1 cook, 1 messenger, 1 hostler and 1 laundress. Two of the attendants are colored women, the cook and laundress. They do not have quarters on the reservation.

(47) Records.

The station records are properly kept with the exception of the clinical histories which are very brief and incomplete. The medical officer's journal has long lapses between records.

(48) Books.

The books in the medical library are mostly old and out of date.

(49) Purchase of Supplies.

Supplies are purchased on yearly contract for all material but groceries, meats, vegetables and janitor supplies which are purchased in open market by special authority from the Bureau. This method has been of benefit to the service, as proposals received from the yearly contract were greatly in excess of the prices in open market. A saving of not less than 15% has been accomplished by the purchase in open market. It would be difficult to obtain proposals at three months intervals here and they would not have any particular advantage.

APPENDIX A.

Marine Hospital at Cairo, Ill.

Appropriation for Repairs and Preservation fo Public Buildings.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

- -

Paragraph of report	ITEMS	Estimated Cost.
8.	Repair floors in Pharmacist's quarters, Building No. 1.	$ 30.00

APPENDIX B.

Marine Hospital at Cairo, Ill.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
18.	Surgeon's washup sink No. 36 R-2-L	$100.00

APPENDIX D.

Marine Hospital at Cairo Ill.

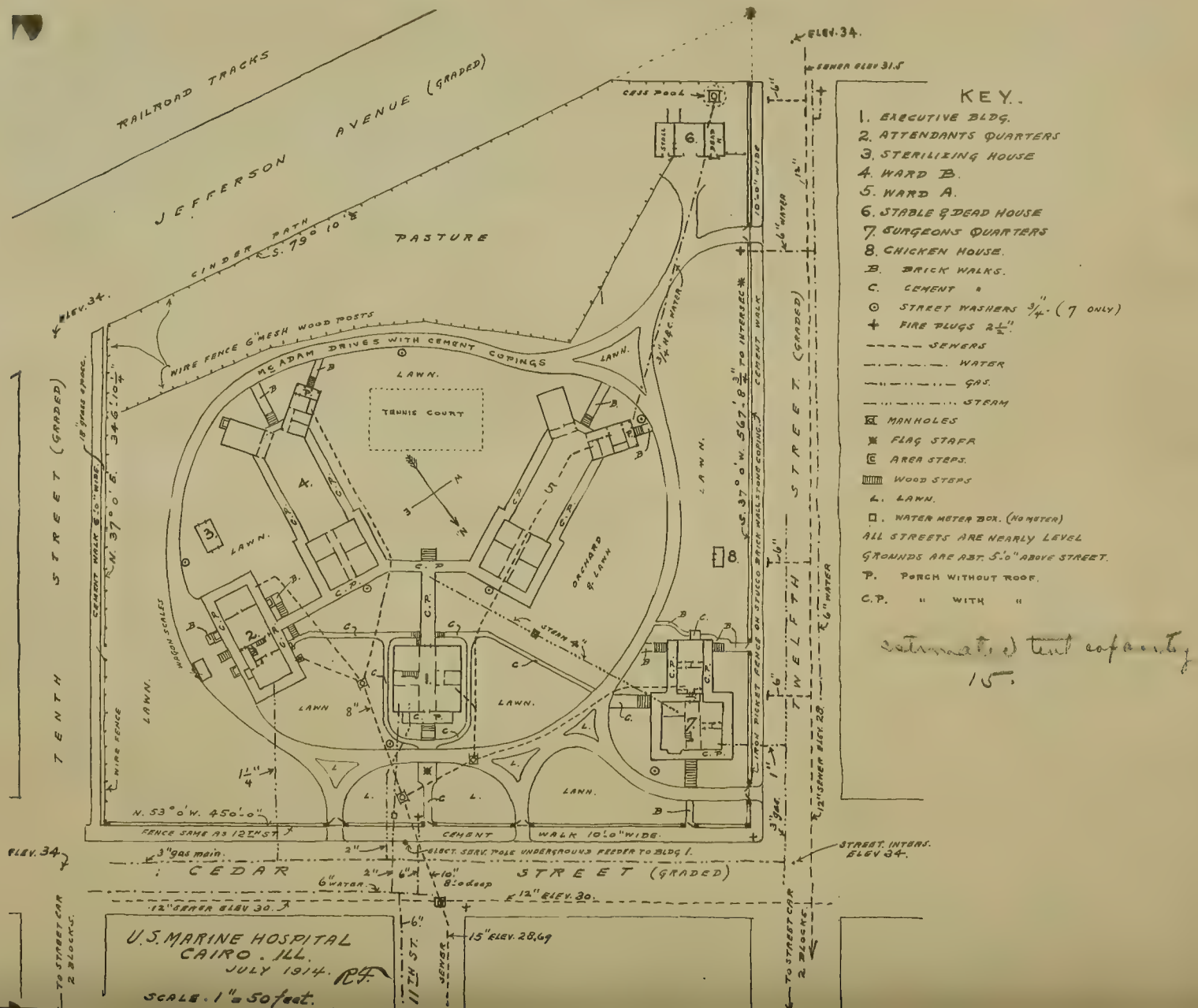
Administrative Equipment.

* * * * * * *

ADMINISTRATIVE equipment which should be immediately provided.
(See Administrative sheet attached)

Paragraph of report	ITEMS	Estimated Cost.
2.	Office (hospital)	$ 50 .00
22.	Wards	560.00
18.	Operating & Surgical Dressing Room	200.00
5.	Kitchen	70.00
10.	Dining Room	146.00
8.	Officers quarters	1,210.00
9.	Attendants quarters	250.00
26.	Direct indirect lighting fixtures for wards only	200.00
		$2,686.00

If the hospital is closed the above named equipment will not be necessary.


RAILROAD TRACKS
JEFFERSON AVENUE (GRADED)
CINDER PATH
S. 79° 10' E.
PASTURE
CESS POOL
STABLE
DEAD H.
6.
ELEV. 34.
SEWER ELEV 31.5
10'0" WIDE
6" WATER
WIRE FENCE 6" MESH WOOD POSTS
MCADAM DRIVES WITH CEMENT COPINGS
LAWN.
TENNIS COURT
N
3
4.
3.
2.
1.
7.
8.
ORCHARD & LAWN
STEAM 4"
C.P.
C.
B.
L.
CEMENT WALK 8'0" WIDE
N. 37° 0' E. 346'10"
18" GRASS SPACE
WIRE FENCE
WOOD SCALES
N. 53° 0' W. 450'0"
FENCE SAME AS 12TH ST
CEMENT WALK 10'0" WIDE.
S. 37° 0' W. 567'-8 3/4" TO INTERSEC.
CEMENT WALK
IRON PICKET FENCE ON STUCCO BRICK WALL TOP COPING
TENTH STREET (GRADED)
TWELFTH STREET (GRADED)
12" SEWER ELEV. 28
STREET INTERS. ELEV 34.
3" GAS MAIN.
ELECT. SERV. POLE UNDERGROUND FEEDER TO BLDG. 1.
CEDAR STREET (GRADED)
6" WATER
10" 8'0" deep
12" SEWER ELEV 30.
12" ELEV. 30.
15" ELEV. 28.69
11TH ST.
SEWER
TO STREET CAR 2 BLOCKS.
U.S. MARINE HOSPITAL
CAIRO. ILL.
JULY 1914.
SCALE. 1" = 50 feet.
KEY.
1. EXECUTIVE BLDG.
2. ATTENDANTS QUARTERS
3. STERILIZING HOUSE
4. WARD B.
5. WARD A.
6. STABLE & DEAD HOUSE
7. SURGEONS QUARTERS
8. CHICKEN HOUSE.
B. BRICK WALKS.
C. CEMENT "
STREET WASHERS 3/4" (7 ONLY)
FIRE PLUGS 2 1/2"
SEWERS
WATER
GAS.
STEAM
MANHOLES
FLAG STAFF
AREA STEPS.
WOOD STEPS
L. LAWN.
WATER METER BOX. (NO METER)
ALL STREETS ARE NEARLY LEVEL
GROUNDS ARE ABT. 5'0" ABOVE STREET.
P. PORCH WITHOUT ROOF.
C.P. " WITH "
estimated tent capacity 15.

· VIEWS · OF ·
· U · S · MARINE · HOSPITAL ·

[illegible] ADMINISTRATION BLDG.

ADMINISTRATION BLDG. & APPROACH.

KITCHEN & ATTENDANTS' QUARTRS

KITCHEN & ATTENDANTS' QUARTRS

WARD "B" REAR.

WARDS & ADMINISTRATION FROM REAR.

[illegible]

WARD "A"

· VIEWS · OF · U·S·MARINE·HOSPITAL·

· CAIRO · ILL ·

HOSPITAL·FROM·STREET·

· WARD · "A" · REAR ·

· SURGEONS' · RESIDENCE · SIDE ·

· SURGEONS' · RESIDENCE · REAR ·

· ADMINISTRATION · B'LD'G · & · DRIVE ·

· SURGEONS' · RESIDENCES · & · APPROACH ·

STABLE & NECROPSY · FRONT ·

· STABLE · & · NECROPSY · REAR ·

August 31, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

I have the honor to acknowledge the receipt of your letter of August 20th, requesting that the bureau comment on the detailed reports submitted by the officers appointed to make inspections of all marine hospitals and quarantine stations, except San Juan, P. R., and Honolulu, Hawaii.

In taking up in this letter the board's report on the marine hospital at Cairo, Illinois, I have the honor to recommend that the marine hospital at that place be temporarily closed and contract made with a local hospital to care for patients of the service. It is also recommended that, in case said marine hospital is closed, contract be made with a local firm to furnish office quarters for the use of the medical officer in charge of the station.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

August 23, 1938.

Sir:

I have the honor to acknowledge the receipt of your letter of August 20th, requesting that the burden so-called [illegible] submitted by the officers appointed [illegible] antine stations, except San Juan, P. R., and Honolulu, Hawaii.

In letting me hear from you the Board's report on the matter specified in Table, Listing, I note the Board proposed that the matter specified as some alone is impossible without an original sole size a small modified to date our training of [illegible] the [illegible] of this, in case said regular inspection is closed, modified or some site a land line is feasible which quarters for the use of the modified officer in charge of the station.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE

PHYSICAL AND ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

CHICAGO, ILLINOIS.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

H. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

U. S. MARINE HOSPITAL, CHICAGO, ILLINOIS.

- - - - - - - - - - - - - - - - -

Report of inspection made November-December 1914, with recommendations as to policy to be pursued.

I
GENERAL CONSIDERATIONS.

(1) Location.

The marine hospital reservation at Chicago, Ill., is located on Clarendon Avenue in Lakeview about five miles north of the harbor (Buena Park) in the residential section, at number 4141. It is bounded on the west by Clarendon Avenue, on the east by Lake Michigan, and on the north and south by abutting property.

The reservation is spacious and attractive in appearance. The grounds are well kept, well turfed and contain a number of handsome trees and shrubs. The reservation is enclosed on the Clarendon Avenue side by a handsome and substantial stone fence with iron picket superstructure. There are three entrance gates, supported by granite pillars, two for driveways and one for foot passengers. On the south and north sides of the reservation there are substantial granite enclosures, and on the lake front is an old breakwater constructed of wood braced with iron rods, and at present in bad repair.

The hospital is an imposing and handsome structure of limestone. It is of the pavilion type consisting of a central executive building of a basement and four stories and two pavilions of three stories. The pavilions end in wings on the north and south sides of three stories in height, and solaria for the use of each ward are placed on these wings on the north and south sides. The hospital faces Clarendon Avenue on the west and on the front of the executive building there are two handsome stone porches on the first and second stories.

(2) History.

There are no available records relative to the history of relief for seamen at this station, but from what can be learned a marine hospital was build on Rush Avenue near the Chicago River in 1857. This was destroyed in the great Chicago fire of 1871 and all of the hospital records were destroyed with it. At the time of the fire the patients were removed from the burning building and transferred to Mercy Hospital in Chicago. The old hospital was used for the care and treatment of soldiers during the civil war.

The patients of the service were cared for under contract at the Mercy Hospital until 1873.

The present building was commenced in 1867 and furnished and completed on November 17th, 1873. The cost at that time, exclusive of furniture was about $422,107.02.

In 1885 the arrangement of the interior was remodeled at a cost of $10,786,26, and $8,000.00 was expended on repairs and construction of the breakwater on the water front.

A power house, heating plant, laundry and isolation house have been added to the original plant,

New walks, roads and a stone coping for the fence on Clarendon Avenue were provided in 1890 and in 1893 $15,000.00 was expended in building a breakwater or bulkhead to protect the water front.

(3) Need for a Marine Hospital.

Chicago is the largest lake port and relief at the hands of the Government for sick and disabled lake sailors is necessary, as the city authorities will not assume the responsibility for their care.

Such relief has been furnished since 1857, and as the present capacious and handsome building is well adapted for the purpose it should be maintained and kept up to a modern standard of efficiency.

(4) Adequacy of Plant.

The present hospital can accommodate a maximum of 107 patients in the main building and 4 in the isolation building.

The maximum daily number in the hospital during recent years has been 103, while the usual maximum has been between 70 and 90. The daily average for 1914 was 66 patients.

The present plant has sufficient bed capacity for the needs of the station for several years to come, but certain improvements are needed to preserve the property and provide facilities more nearly complying with modern hospital requirements. These are described under section III.

(5) Acquisition or Disposal of Land.

The area of the present reservation, approximately 13 acres, is sufficient for all prospective needs of the station and is valued at from four to five hundred thousand dollars.

Although this valuation is high for hospital purposes, the investment in the present plant does not warrant any change in its location.

(6) Future Development or Disposal of Plant.

The present plant is admirably located and should not be disposed of. The main building is well designed to meet the requirements of modern hospital practice and space can readily be provided for all probable prospective needs of the station by the removal from the building of the quarters for officers and attendants. The hospital, as originally constructed, consisted of a central building of four stories with two wings of three stories for wards.

Subsequent to its erection however the upper stories of the central building have been devoted to officers' quarters and the third floor of the north wing to attendants' quarters, with consequent reduction in the space

In case the circumstances of the catastrophe are reasonably favorable, it may be possible, and is, in fact, the aim, to prevent or minimize real conflagrations of the character on the British Fleet.

A power house, machine plant, foundry and boilerhouse have been added to the original plant.

The water, which was a strong helping for the fleet at Scapa Flow, was provided in 1916 and the work completed, the remainder is building a reservoir or cistern to protect the water front.

(5) Fuel for Motor Vehicles.

Shortage in the January-June 1917 was critical at the height of the campaign for most and standard fuels within to commencement, by the 1917 war-fuel will not remain the responsibility for fuels also.

Fuel utility has been Terrible since 1917, and at the present time the Government facilities to meet requires for the purpose it should be satisfactory and hard on to a means standard of efficiency.

(6) Explosives at Fleet.

The present facilities and arrangements of machine of 117 pitrate in the main building are a in the existing facilities.

The machine only number of the required number were lost, while the total machine has been increased to and 40. The daily output of 117 was in pitrate.

The present plant has sufficient for minimum for that daily of existing for every to time, the special laboratories are located at Pressure the factories and civils facilities have machine-building with the hydrid machinery. Then is Analytical under machine 117.

(7) Facilities at Stockpile-Fuel.

The area of the present magazine, approximately 22 acres, is suffi-cient for all requirements of the station and is valued at less than the Bedford Chemical Co.

Although the facilities of 1916 for shipping increased, the tonnage in the present plant has not reached any change of the Tankers.

(8) Safety Precautions at Stockpile Fuel.

The present plant is adequate for the fuel and should be flooded at the main building by pipe machines in main the requirements of modern fuel plant practice and space can easily be provided for all provide protection in case of the events of the enemy. Fuel the facilities of the quantity for allowance and stockpile. The depots, as usually assembled, consists of a central building of four storeys with the stack of items storage the usual.

Referred to the storage number the major storage of the bombs, ammunition and fuel large in efficiency. Factory the Fuel Chemical Co. and the work that to efficiency. Factory, the Government facilities of the plant

available for patients and for administration, and the cutting off of free passage between the wings and the central portion.

When the needs of the service demand increased facilities at this station buildings should be erected on the present reservation for quarters for officers, including pharmacist, and for attendants, and the space in the present building thus vacated, reassigned to take advantage of the excellent layout which the original design provided.

The remodeled building will accommodate a maximum of approximately 150 patients.

The changes in the main building are briefly as follows: 3d floor N. Wing. This entire floor is now devoted to quarters for attendants. Take out all partitions to stair hall devoting the wing to ward purposes. Use solarium at end for recreation purposes and small room on opposite side of building from toilet room as a quiet ward.

The small room opposite stair hall and adjoining small room in center building can be used for diet kitchen and other ward accessories.

1st & 2nd Floors N Wing and 1st, 2nd, and 3rd floors S Wing.

In general devote the entire floor to ward purposes to stair hall partition with the same general arrangement as for preceeding paragraph. The present kitchen in basement of S wing should be used for attendants dining room.

Center Building.

Basement.

Use space west of hall for kitchen and pantry with refrigerating and food storage rooms on East side directly opposite. Provide entrance to elevator at basement floor level and outside entrance to building nearly opposite, adjoining operating room extension.

Use space under morgue for necropsy purposes and X-Ray. Install two dumb waiters, one for each wing in old vent shafts.

Upper Floors.

Use upper floors for administrative purposes, patients dining room, internes, and female nurses dining rooms, sick officers ward and quarters for a bacheler assistant surgeon. Dining rooms should be located on second floor.

II
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * * *

(1) Appropriation for Repairs and Preservation of Public Buildings.
(For details see Appendix A)
Total estimated cost of work recommended. $ 4210.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings.(for details see appendix B)
Total estimated cost of work recommended. 720.00

(3) Legislative Appropriation for New Construction
(for details see appendix C)
Total estimated cost of work recommended $40,000.00

(4) Appropriation for Administrative Equipment
(for details see appendix B)
Total estimated cost of items recommended 4,737.00

T O T A L $49,687.00

(5) Personnel.

Adequate.

III

DESCRIPTION OF PLANT & IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1. The main hospital building, which is of limestone exterior 3 & 4 stories high, with basement under entire structure, and slate roof, is fireproof throughout. The main halls on all floors are of marble tile; other halls have composition floors; toilets generally have tile or terrazzo floors. Operating suite has marble slab floor, pharmacy composition floor; solarium or smoking room and laboratory have stone flagging for floors. All floors in basement are cement except kitchen, patients' dining rooms, which are composition. All other floors are maple or hard pine. All trim is pine and painted. Walls and ceilings are plastered and most of them have been newly painted in very satisfactory colors.

Building No. 2. Boiler house, Laundry, Stable and Isolation Hospital is a group of connecting buildings having brick superstructure, one and two stories high, with shingle roofs. Section 1, boiler house and coal storage. One story, with pit for pumps etc. Open steel truss roof, painted. Brick walls and cement floors. Fireproof except roof. Steam heat, electric light. Floor area ____ feet.

Section No. 2, Pipe shop, coal weighing room and toilet. One story. Plastered walls and ceilings, unpainted. Cement floors and base. Pine trim painted. Floor area 1972 square feet.

Across a covered driveway is a laundry, which has cement floors and base. Plaster walls and ceilings, painted. Pine trim, painted. Steam heat, Electric light. Floor area 1885 square feet.

Section No. 3 is two stories. The first story contains an entrance hall having terrazzo floor, a toilet room with marble tile floor, a mangle room with cement floor, and a laundry for officers clothing. All walls and ceilings in these rooms are plastered and painted, wood trim painted. There is also a stable and carriage room with cement floors, brick walls painted, and plastered ceiling; also a room for yard tools, having cement floor, plastered walls and ceilings not painted.

All woodwork in this section is pine painted. On the second story over stable is an open hay loft, with exposed steel roof framing, and sleeping quarters for stableman and hospital employees, and a large toilet room having composition floor; all other rooms have wood floors and pine trim, plastered walls and ceilings painted. The building is semi-fireproof, and has no basement. Steam heat and electric light. Floor area 4216 square feet.

Section No. 4. One story high. Adjoins the laundry and stable by a covered passage and contains the contagious ward, a room for a nurse, a toilet and entrance hall; all floors in this section are terrazzo, plastered walls and ceilings painted, pine trim painted. There is also a room for a steam disinfector, which is small for general hospital work but satisfactory for the contagious ward. This section is fireproof except roof. Steam heat, electric light. Floor area 720 square feet.

(2) Offices.

Surgeon's Office.

Located on the first floor of the hospital on the north side of the entrance corridor is a large room, well lighted and fairly furnished. A new carpet and some furniture is needed, and probably a files case for journals circulated in the lake region and returned to Chicago.

Pharmacist's Office.

Is located opposite the surgeon's office, is about the same size, is conveniently located and well lighted. It needs a new desk, chairs, table and filing case.

(3) Visitors' Reception Room.

No room is set apart for this purpose, and according to the present assignment no space is available for such a purpose. Visitors sit in the entrance hall and corridor.

(4) Examining Room.

No special room for this purpose. Necessary examinations made in offices, dispensary and surgical dressing or in clean operating room, laboratory for X-Ray room.

(5) Kitchen and Diet Kitchen.

The main kitchen is located in the basement in the south wing. It is a large room and not very well furnished. Two new ranges will be needed within a year, one for gas and one for coal, and a kitchen cabinet is desired to hold various things in daily use. There is no steam table and no soup kettles in this room, soup being prepared in stock kettles on the kitchen range.

A kitchenette furnished with a small gas range and the necessary outfit of dishes placed in a small room convenient to each of the principal wards answers this purpose. There is a dumb waiter service available for the wards in the south pavilion only. The food is conveyed to the wards in the north pavilion in a food carriage.

(6) Pantry and Food Storage.

Pantry.

There is a good sized room between the kitchen and patients' dining room which is used for this purpose. It has a dish washer and necessary equipment for storage of patients' dishes.

Kitchen Storage Room.

This is located across the basement hall diagonally opposite the kitchen, is of sufficient size and ample for all needs.

(7) Store Rooms.

Rooms for general stores, subsistence, medicines, stationery and linen, records, hospital bedding and unserviceable property, are located in the basement and are ample in size for all requirements.

(8) Quarters for Officers.

Surgeon Quarters.

Are located on the second floor of the executive building, and consist of a parlor, library, dining room, four bedrooms, a kitchen, bathroom, servants' room and bathr om. These quarters are spacious, the rooms large and are handsomely furnished. A dummy table and a sideboard, two new carpets for the parlor and library, a kitchen cabinet and minor repairs to furniture are needed.

Passed Assistant Surgeon's Quarters.

Located on third floor of main or executive building; consist of a parlor, dining room, bedroom, kitchen, bathroom and servants' rooms. They are sufficiently furnished and need only ordinary furniture repairs. A kitchen cabinet would be desirable to keep kitchen supplies away from the small ants that abound in this sandy soil.

Assistant Surgeon's Quarters.

These quarters adjoin those of the Passed Assistant Surgeon and consist of a parlor, dining room, bedroom, kitchen and bathroom. They are sufficiently equipped and need only ordinary repairs to furniture.

Interns' Quarters.

Consist of asittin room on the east side of the first floor of the main building, and a bedroom on the first floor, east side of the north wing. The furniture is adequate.

Pharmacists Quarters.

Located on the third floor of main or executive building and consist of parlor, two bedrooms, bathroom and kitchen. Some repairs to floors are needed in these quarters, and a chiffonier is required.

Clerks' Quarters.

Consist of one room on fourth floor adjoining pharmacist's rooms on the southside.

Female Nurses' Quarters.

Two female nurses are quartered in one room opposite the clerks' room and have a bath and toilet room on the east side of the fourth floor. These rooms require a carpet and two three-quarter beds of white enamel with mattresses; otherwise they are sufficiently furnished.

(9) Quarters for Attendants.

Four male nurses have furnished rooms adjoining the wards. Five attendants have quarters in the second story of the laundry building, and thirteen are lodged in what is known as the "barracks" in the north wing or pavilion on the third floor. These rooms are comfortably and sufficiently furnished.

(10) Patients' Dining Room.

This is a large room located near the kitchen on the west side of the basement in the central or executibe part of the hospital. It is suitable for the purpose and sufficiently furnished.

(11) Internes' and Officers' Dining Room.

A small room at the rear of the pharmacist's office on the first floor is used for this purpose. It accommodates the internes, clerk and two female nurses, and is furnished sufficiently and convenient to the dumb waiter service.

(12) Attendants' Dining Room.

Adjoins the patients' Dining room in the basement. It is adequately furnished.

(13) Recreation and Smoking Rooms.

The solaria at the north and south ends of the wards are used for this purpose, except when these rooms are in use for the treatment of patients requiring an abundance of fresh air such a pneumonia, etc. They seem to be ample for recreation purposes. The solarium on the second floor of the north wing is used as a laboratory.

(14) Disinfecting Facilities.

A Kinguen Francis steam disinfector with a Formalin & ammonia attachment is located in the isolation or contagious ward building, which is inadequate for the general hospital service, but desired for contagious ward purposes. A new large disinfector should be located in the present record room in the basement of building No. 1.

The instrument, bandage and dressing sterilizers are adequate in number and are located conveniently in the various parts of the hospital. Utensil

disinfectors located in ward toilet rooms are generally adequate and in fair condition.

(15) Incinerators.

There are no incinerators in the station other than a wire basket in the yard for burning dry garbage. Infected bandages, etc., are burned under the heating boilers, in sealed paper bags. A water jacketed incinerator should be located in the basement, near kitchen for incineration of infected bandages; the dry garbage and waste paper is taken care of satisfactorily at present.

(16) Disposal of soiled linen.

Soiled linen is deposited in ordinary wicker baskets placed in the hall between the wards and the solaria and then carried to the laundry. Infected linen is soaked in carbolic acid solution 5% before being sent to laundry and infected bedding and clothing is disinfected in the steam sterilizer in the laundry building. Sanitary baskets or bags should replace the wicker baskets now in use for the storage and removal of soiled linen from the wards and rooms. The old linen chutes in the building have been discontinued.

(17) Laundry Facilities.

Adequate and very satisfactory laundry facilities are provided in sections 3 and 4 of building No. 2, both for patients' and officers' clothing. The machinery is driven by a vertical slide valve engine. This engine is in bad condition and should be abandoned in favor of a motor, especially as current is supplied at an unusually cheap price. The laundry for patients contains 3 washers, 1 centrifugal dryer, 1 steam soap kettle, an 11 track steam dryer, an 84" mangle, and one shirt ironer; these 3 latter machines being used for both patients' and officers' clothing. The laundry for officers' clothing contains 1 washer, 1 centrifugal dryer, and a 4 track steam dryroom. These accommodations are in good repair, except as to engine above noted. A collar ironer is required.

(18) Operating and Surgical Dressing Room Facilities.

Surgical Operating Room.

The room assigned for this purpose is a special structure, a semi-circular extension of one story, with dome roof and extended from the main building on the first floor on the east side and built against part of the center or executive building and the south pavilion. It has ceiling and side lightint windows, marble floor and wainscot, is a large room and has a good equipment except the operating table, which should be replaced by one of modern type. This room, built under the service of the late Ex-Surgeon General J. B. Hamilton, in 1896, is said to have cost the sum of $10,000.00. The dressing and instrument sterilizers are placed in this room. It has a basement which is now used as storerooms.

A wash-up and Etherizing Room adjoins the general operating room, is of fair size and adequately furnished. It has four medium sized porcelain sinks with knee attachments.

Surgical Dressing Room.

A large room on the east side of the southern pavilion on the first floor used as an operating room for pus cases also serves as a dressing room. It is well lighted and furnished. The sink in this room is large with dripboard sides of Tenn. marble, but has only hand attachments for drawing water. Knee attachment should be provided.

(19) X-Ray Facilities.

The space used for this purpose is a small dark room adjoining the wash-up room between it and the surgical dressing room. It is too small for the purpose and is really an open passage way leading from the dressing room to the wash-up and operating rooms. It should be removed either to one of the rooms in the basement or to the nurses' room adjoining the laboratory on the second floor of the north wing and the nurses lodged elsewhere. The space now used by the X-Ray outfit could be used as an etherising or rest room.

The X-Ray outfit consists of Schneidel Western X-Ray coil, a Roentgenscope X-ray tube and holder, table, etc., and the outfit is sufficient for the needs of the station. Four new x-ray tubes are needed.

(20) Laboratory.

The laboratory in the solarium at the end of Ward 3 on the second floor is well lighted and well equipped for clinical work. Wassermans' and other blood work is done in this room.

(21) Dispensary.

This is a large room on the east side of the main building formerly used as a waiting room. It is well lighted and adequately furnished for the needs of the hospital.

(22) Wards for Seamen.

1st Floor. There are two wards on this floor, A and D, with normal capacity of 20 beds each.

2nd floor. There are two wards on this floor, B and E, with a normal capacity of 20 and 10 beds respectively.

3rd floor. There is only one ward, C, on this floor and in the south wing. This ward is divided into two parts of 5 and 15 normal bed capacity each.

All wards have solaria at their ends originally designed as smoking and recreation rooms. At present the one in the North wing or off Ward E is used as a laboratory, those off of wards B and C for additional ward space and those off wards A and D as recreation rooms . Tubercular patients are cared for in Ward C and solaria attached to it. All wards are exposed on two sides, east and west and are light and airy.

(23) Quiet Wards.

There are no rooms specifically set aside for this purpose. The room assigned for officers of the Revenue Cutter Service on the 2nd floor can be

used for this purpose when necessary, also the smaller part of Ward C. Attached to each ward is a small room occupied by nurse which would make satisfactory quiet wards if such should prove to be needed.

(24) Wards for Revenue Cutter Officers.

There is a room on 2nd floor provided for this purpose, capacity one to two beds. The demand for such service is slight and the room is usually used for general ward purposes.

(25) Toilet Facilities.

The toilet facilities are generally satisfactory except that those for wards are somewhat small, containing but two closets each for the wards. Shower baths could supercede the bath tubs to advantage. This however is not urgent. The toilets and lavatories are well located throughout the building, while those for wards only are at the end of each ward. One hall or entrance to these toilets is about 8" below the level of the ward floors and that of the toilet rooms, and this floor should be raised level with both ward and toilet to facilitate entrance of patients in wheel chairs. All apparatus is in generally good repair except a new sink in the morgue. Plate no. 39, Treasury, War and Navy Specification.

(26) Portable Tubs.

There are two of these tubs with racks, in good order and ample for all needs.

(27) Padded Cells.

There is no special room for the care of violent alcoholic and insane cases. One of the solaria at the end of the wards being used in cases of emergency and until removal to one of the city institutions. Such a room should be provided and one of the private rooms or wards on the east side of the north wing second floor could be fitted up for this purpose.

(28) Necropsy Facilities.

A somewhat cramped space in the basement of the north wing of the main building contains an autopsy table, a small iron sink, and stands for instruments. The room has cement floor, with drain, masonry walls, plastered ceiling, wood trim, all painted, and while somewhat difficult of access, is satisfactory for present needs.

(29) Isolation Facilities.

Are provided in a separate building in the rear of the hospital proper, which contains one ward of 3 beds, a toilet room and a room for a nurse. These rooms are well arranged and adequate for all probable needs, and have terrazzo floors and base, plastered walls and ceilings, wood trim, all interior surfaces painted; steam heat, electric and gas illumination, and are satisfactory.

(30) Out-patient Office

This office located in the Crilly building, corner of Dearborn and Monroe Streets, Chicago, Ill., consists of five rooms as follows: waiting, examin-

ing, dressing, dispensing rooms and the office of the medical officer. They are sufficiently furnished.

(31) Floor Space.

Total net floor space main building		
" " " " basement	8001	Sq. Ft.
" " " " 1st floor	7983	"
" " " " 2nd "	7387	"
" " " " 3rd "	6720	"
" " " " 4th "	3553	"
	33654	"
Total hall space	11828	"
	44482	"

Total net floor space for hospital uses.	50%
" " " " " Quarters (except Hall space)	23%
" " " " " Hall space (including quarters)	27%
	100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the main building is 92 beds, maximum 102, including 2 beds for officer of Revenue Cutter Service. In addition the solaria at ends of wards B & C are usually used as wards giving a total of 5 additional beds. There also are 4 beds in isolation building in one ward. On a normal basis each patient in main building has 88 square feet of floor space and 1150 cubic feet of air space, except on the third floor where, with a higher ceiling, the air space per bed is 1240 to 1850 cubic feet, floor area 80 to 87 square feet.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, and 1914, and also for the perior from July 1 to October 31st for the calendar years 1913 and 1914.

	Fiscal years.			July 1st to Oct. 31st.	
	1909	1913	1914	1913	1914
No.days Hospital relief furnished.	19066	17379	24011	6626	5328
Daily average hospital patients.	52.2	47.6	66.'		
Total daily cost per hospital patient.		$3.86	$3.94.		
Number of hospital patients.	504	495	726		
Number of outside patients.	1720	1437	1339		
Number of times treated.	2154	2556	2436		

On November 27th there were 51 patients of whom 20 were chronics. Tubercular patients 10. The maximum daily number in the hospital for the last few years was 103 in February 1914. The number of days hospital relief furnished in 1914 was 38% greater than in 1913 and 26% greater than

in 1909. The relief furnished for the first 4 months of fiscal year 1915 is 22% less than for the same period in the preceding year.

(34) Ambulance Service.

The station has a one horse ambulance which in general is sufficient for the usual requirements of 5 or 6 trips per month. In addition service is provided for under contract at $1.00 per mile of distance; patient is carried with minimum charge of $3.00. This is equivalent to $5.00 for trip from city office. Facilities satisfactory and adequate.

(35) Heating, Power Plant and Ventilation.

The entire plant is heated from a central station located in the rear of the hospital, connected to it by a tunnel for heating mains and smoke flue, to a stack attached to the hospital building 130 feet from the boilers.

The service is adequate and in good repair, needing no additions not authorized, and these are incident to betterments to the basement. Ventilation is by registers to vent stacks to roof, and is adequate and satisfactory. No power except for a small engine in the laundry is needed, and this is provided for by running boiler pressure at 40#, and reducing valves to heating service to 3#, which is satisfactory. An electric dumb elevator should be installed in the north west corner of ward A adjoining interns dining room.

(36) Illumination.

The entire illuminating plant has recently been overhauled and modernized in an effective and satisfactory manner, and is adequate in all respects. Semi direct fixtures are installed in all wards, which is very satisfactory.

(37) Decoration.

The building has recently been redecorated in a very satisfactory manner and in colors that are in line with the best practice.

(38) Telephone and Call System.

There is one direct connected city telephone, Bell system, with extension in commanding officer's quarters. Also one in city office. There is an intercommunicating telephone system of 20 stations connecting the various parts of the main building and the out buildings, in good condition and adequate.

There is an adequate watchman's clock system.

There is no bedside or other call system for summoning the nurse on duty at night.

On account of the extent of the building and the widely separated wards, some system for summoning the night nurse to the various wards should be installed.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant in the building and none is needed. Artificial ice of satisfactory quality is delivered daily into large well drained refrigerator.

(40) Water Supply and Fire Protection.

Water is obtained from City Main in Clarendon Avenue through connection to boiler house, said to be 4" a part of the distance and 8" the remainder. Main building is connected to boiler house by 2" line.

Mains within main building are 2" throughout. Water is obtained from the Lake and is of good quality. Pressure is 35# to 40# and at times is inadequate to supply top floor. Sectional cast iron tanks in attic, filled by steam pumps are used to supply deficiency. There are nine hose racks with 100' and 50' of 2½" fire hose in main building and two in the laundry and power plant building with 50 feet of hose. Hose is connected to 2" piping, is not in good condition and is too large for the pipe connections. There are no fire hydrants on reservation but there are two city fire hydrants on reservation but there are two city fire hydrants on Clarendon Avenue in front of the property. Fire engine house is 7 blocks away. There are 12 chemical fire extinguishers, 3 gallon Underwriter type.

A four in ch main should be provided from street to main building and boiler house. Present hose in buildings should be replaced with 1½" or 2" linen hose. Six additional fire extinguishers, 3 gallon Underwriter type should be provided for the main building.

(41) Fire Alarm System.

There is a ships bell which is struck by hand: A modern system with pull boxes and gongs on all floors of the main building and in laundry and power house building should be installed.

City fire alarm box is one block away.

(42) Sewer and other Drainage.

A 10" sewer connection with the city sewer service supplies adequate and efficient sanitary and surface drainage from all buildings on the reservation. A separate 4" sewer extends from the boiler house to the lake, which is used exclusively for boiler blowoff.

(43) Streets, Roads, Walks, Fences and Grounds.

There is a macadam driveway from Clarendon Street leading to and around the buildings which is adequate and in good condition.

A broad concrete walk connects the main entrance of the hospital building with that of Clarendon Street in front, while walks of similar material connect the laundry and isolation wards in the rear; these are in good condition and adequate.

The property is inclosed by a 6'0" wrought iron fence on the front and

by masonry walls 3'0" high on either side, while the rear abuts on Lake Michigan at a very much damaged seawall. Wood fence along part of north boundary.

The grounds are spacious, well kept and present a pleasing appearance. There are a number of fine trees, shrubs, etc.

(44) Wharves, Sea Walls, etc.

There is an old timber breakwater on the shore front about 560 feet long. It is in very bad condition and should be replaced as soon as possible. Request for appropriation has already been made and the matter should be pushed. Estimate $40,000.00. There are no wharves.

(45) Live Stock, Vehicles, etc.

There is one horse, a one horse ambulance, and a horse power lawn mower on the reservation. Ambulance service is largely furnished under contract.

Facilities adequate.

(46) Personnel.

There are on duty at this station: 3 commissioned officers, 1 surgeon in charge, 2 assistant surgeons (1 on duty in the out patient office in the city). Other officers, 2 interns, 1 clerk, 2 female nurses, 22 attendants classed as follows: 1 engineer, 1 cook, 2 laundrymen, 1 carpenter, 6 nurses, 1 fireman, 1 second cook, 1 driver, 2 hallmen, 1 night watchman, 2 orderlies, 1 dining room man, 1 pantryman, 1 fireman.

The above named force is sufficient for the needs of the station.

(47) Records.

The hospital records and books are kept in a careful and systematic order and the clinical histories are complete and detailed records of each case.

A new system for keeping the patients' money is in use. A slip is issued to each man depositing money as well as the usual receipt. No envelope is used, all of the money being kept in one roll. Amounts withdrawn by patients are noted on the receipts and on the slip, one copy of which is kept by the medical officer in charge and one by the pharmacist.

(48) Books.

The station library contains quite a number of modern books on surgery, medicine, bacteriology, pathology, etc., and is up to date.

(49) Supplies.

Subsistence and other supplies are purchased on accepted proposal every three months without contract. It involves a little more clerical work. There is more choice for selection from different dealers than by yearly contract. The open market method would be somewhat cheaper but would not have any particular advantage at this station.

[illegible]

(44) [illegible]

[illegible]

(45) [illegible]

[illegible]

(46) [illegible]

[illegible]

(47) [illegible]

[illegible]

(48) [illegible]

[illegible]

(49) [illegible]

[illegible]

APPENDIX A.

Marine Hospital at Chicago, Ill.

APPROPRIATION for repairs & Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * * *

Repairs mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS.	Estimated Cost.
14.	Rearranging room in Bldg. No. 1 for steam sterilizer.	150.00
25.	Raising floor to toilet room level.	60.00
27.	Padded Cell room	150.00
35.	New dumb waiter shaft.	450.00
19.	New X-Ray room.	200.00
38.	Bedside call system.	1,600.00
40.	New mains, hose racks and fire extinguishers.	1,000.00
41.	Fire alarm system.	600.00
		$4,210.00

APPENDIX A.

Marine Hospital at Stapleton, N.Y.

APPROPRIATIONS for repairs & preservation of public buildings.

Specific appropriations can be traced back to 1852 only where the purchase was made to substitute immediately.

Number of Report.	Item.	Estimated Cost.
54.	Portsmouth navy yard in Va. & New Orleans arsenal.	[illegible]
55.	Existing floor in Boston navy yard.	[illegible]
57.	Boston dry docks.	[illegible]
58.	New navy medical school.	[illegible]
59.	New 3-ft. room.	[illegible]
60.	Baltimore dry docks.	[illegible]
62.	Pad Walker, Pres. Lincoln and Pres. Washington.	[illegible]
63.	Pad Lincoln monument.	[illegible]
		[illegible]

APPENDIX B.

Marine Hospital at Chicago, Ill.

Appropriation for Mechanical and Electrical Equipment.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report	ITEMS.	Estimated Cost.
14.	New steam lines for steam sterilizer in basement of building No. 1.	75.00
17.	Motor for driving laundry machinery.	175.00
25.	New sink in Necropsy room.	35.00
18.	Knee attachment for surgical dressing room.sink.	35000
35.	New dumb waiter and machinery.	400.00
		$720.00

APPENDIX E.

Marine Department of Ceylon, [illegible].

Appropriation for Development and Improvement Dredgers.
* * * * * * * * * * * * * * * * * * * *

[illegible] maritime transport line in the area of their relative importance and should be undertaken immediately.

* *

Paragraph of report.	ITEM.	Estimated Cost.
14.	One motor launch for communication in harbour at Dredging No. 1.	[illegible]
15.	Crane for erecting bucket machinery.	[illegible]
16.	Lay-aside in Dredging room.	[illegible]
17.	Bow-chainwheel for anchors handling machine.	[illegible]
18.	Bow chain motor and controller.	[illegible]
		[illegible]

APPENDIX C.

Marine Hospital at Chicago, Ill.

New Construction.

* * * * *

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

* * -

Paragraph of report.	ITEMS.	Estimated Cost.
44.	New sea wall & breakwater.	$40,000.00

Electric sunde water 1917 - 1000.00
See A+B. item 3 v. Penny

APPENDIX D.

Marine Hospital at Chicago, Ill.

Administrative Equipment.

*C * * * * * *

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS.	Estimated Cost.
14.	Steam sterilizer	$1,600.00
2.	Offices (hospital)	405.00
22.	Wards,	200.00
18.	Operating room	175,00
19.	X-Ray room.	160.00
5.	Kitchen	375.00
17.	Laundry	250.00
8.	Officers' quarters	427.00
9.	Attendants' quarters	15.00
	TOTAL	$3607.00
15	Water jacketed incinerator	150.00
14.	Steam Sterilizer	1000.00
		$4757.00

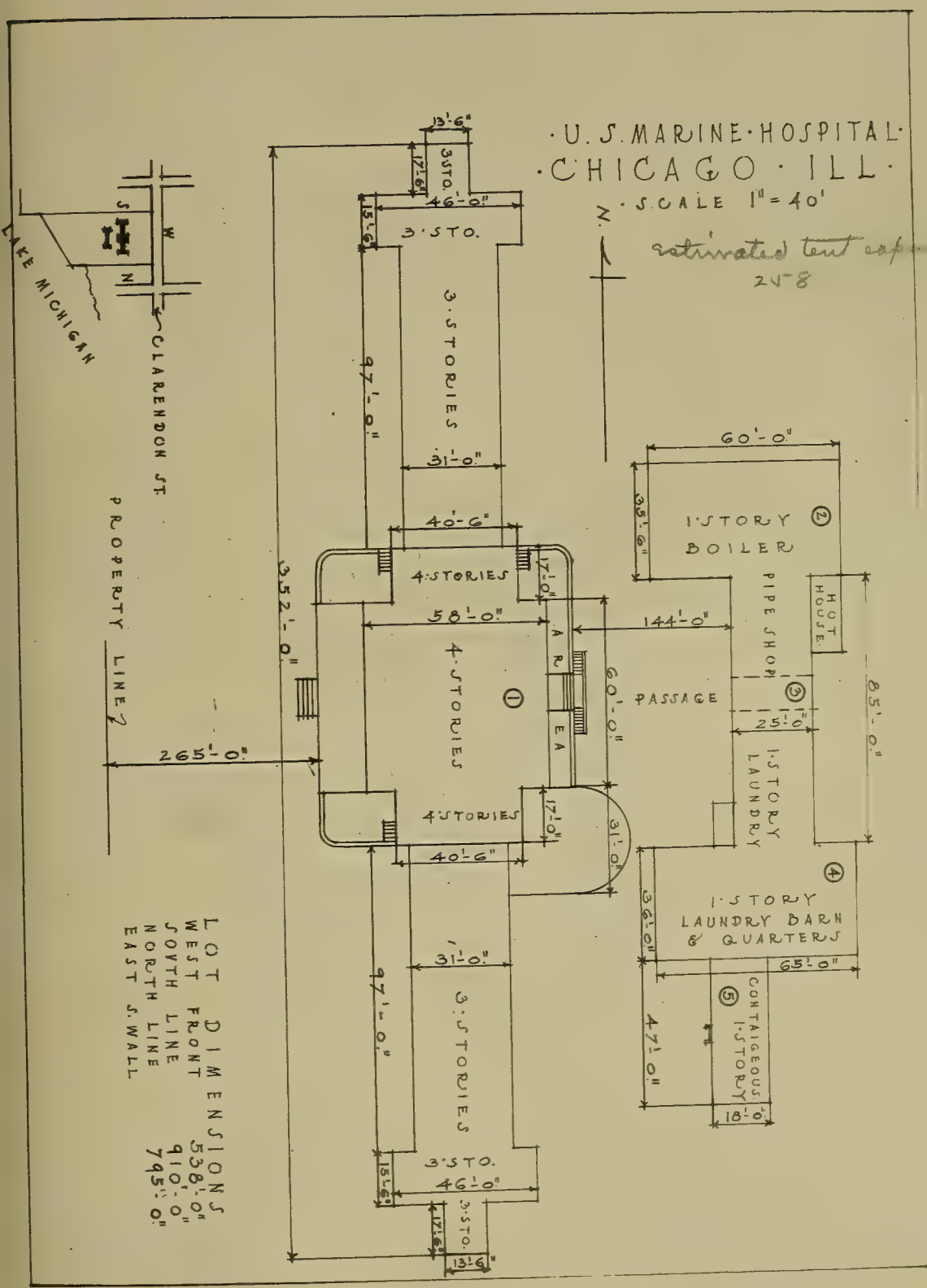
APPENDIX D.

Water Supplied at Toronto, 1911.

Municipalities Supplied.

AMALGAMATED Judgment order should be immediately granted.

Number of Report.	1908.	Estimated Cost.
14.	Glen Mountain	[illegible]
5.	Milton (Supplied)	[illegible]
41.	Burns,	[illegible]
[illegible]	Dundalk Town	[illegible]
[illegible]	Tottenham	[illegible]
4.	Etobicoke	[illegible]
17.	Dundas	[illegible]
7.	Gilmour' quarries	[illegible]
7.	Gilmour' quarries	[illegible]
11.	Bond Junction Subdivision	[illegible]
31.	Bruce Stevenson	[illegible]
		[illegible]


·U.S.MARINE·HOSPITAL·
·CHICAGO·ILL·
·SCALE 1"=40'
estimated tent capacity 25-8
N.
LAKE MICHIGAN
CLARENDON ST.
PROPERTY LINE
265'-0"
352'-0"
13'-6"
17'-6"
3 STO.
46'-0"
15'-6"
3·STO.
3·STORIES
97'-0"
31'-0"
40'-6"
4·STORIES
17'-0"
58'-0"
4·STORIES
A R
E A
60'-0"
144'-0"
PASSAGE
25'-0"
1·STORY LAUNDRY
31'-0"
40'-6"
4·STORIES
17'-0"
31'-0"
97'-0"
3·STORIES
15'-6"
3·STO.
46'-0"
3·STO.
17'-6"
13'-6"
60'-0"
35'-6"
1·STORY BOILER
PIPE SHOP
HOT HOUSE
85'-0"
36'-0"
1·STORY LAUNDRY BARN & QUARTERS
65'-0"
47'-0"
CONTAIGEOUS 1·STORY
18'-0"
LOT DIMENSIONS
WEST FRONT 538'-0"
SOUTH LINE 910'-0"
NORTH LINE 795'-0"
EAST S. WALL

VIEWS OF U.S. MARINE HOSPITAL

CHICAGO ILL.

HOSPITAL & GROUNDS FRONT

HOSPITAL & GROUNDS FRONT

GROUNDS IN FRONT

INSOLATION LAUNDRY & POWER HO

GROUNDS AT REAR OF LAUNDRY

DAMAGED BULKHEAD

DAMAGED BULKHEAD

DAMAGED BULKHEAD

JTC

September 24, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Chicago, Illinois.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

CINCINNATI, OHIO.

BY

D.A CARMICHAEL,
Senior Surgeon, U.S.P.H.S.

N.V.PERRY,
Supervising Superintendent,
of Construction, U.S.P.B.

A.L.PARSONS,
Civil Engineer, U.S.N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

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Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
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Appendix C - Items of New Construction.
Appendix D - Summary of Additional Equipment required.

Drawings.
Photographs of Station.

U.S. MARINE HOSPITAL, CINCINNATI, OHIO.

Report of inspection made December 1914, with recommendations as to policy to be pursued.

I.

?GENERAL CONSIDERATIONS.

(I) Location.

The Marine Hospital reservation, consisting of one and one half acres, is located about one mile east of the center of the city of Cincinnati, Ohio, and is bounded on the North by Third Street, on the West by Kilgore Street, on the South by Pearl Street, and on the East by adjoining private property.

The land lies on a hill and steep bluff from Third street to Pearl street, about one third is level and the balance lies on the hill side which has been neatly terraced, The entire property is inclosed by fence.

The Hospital Buildings are located nearer the level portion of the lot and are well disposed as to access and convenient arrangement of the several units.

(2) History.

The property, the Kilgore Mansion, after being purchased by the Government, was remodeled and three additional buildings erected, was opened and operated as a Marine Hospital, until 1905, and then abandoned, until 1913 when it was, decided to estiblish a Public Health Investigation, headquarters here: The main or executive building was placed in partial repair and has since the latter date been used by the Service for Investigation of the Pollution of the waters of the Ohio River and its tributaries, and other work of similar character.

There were no records at this station from which data other than above given could be secured, but it was learned that the present valuation of the property is estimated at about Ten thousand dollars.

The property had been abandoned so long without a caretaker that all the wood framed buildings have fallen to such a state of decay as to be beyond usefulness or economical repair, the windows being broken, roofs leaking and interior work generally in a bad condition.

(3) Need for a Marine Hospital.

There is now no need for a marine hospital at this point.

(4) Adequacy of Plant.

The existing plant is over adequate for present or prospective needs, The brick buildings should be retained, the others removed; as only Public Health Investigation work is likely to be done at this station.

It is believed that no provision need be made for the care of patients as for the investigation of human diseases,as provision therefor can be more cheaply had at local hospitals,under contract, as at present for disabled seamen.

(5) Acquisition or disposal of Land.

The reservation consisting of one and one half acres,is sufficient for all probable future needs. None of it should be disposed of.

(6) Future Development or Disposal of Plant.

All wood framed buildings should be removed from the premises; The brick buildings should be remodeled to meet the requirements of the class of service now being performed,which consists principally of Laboratory Work,Keeping of extensive records,and as a headquarters for Field Investigation and Survey force.

The present Executive building, No.1,Should be arranged for Laboratory and Executive Offices, The Barn for storage of heavy equipment for Field Work, The Outpatient Office building, No.5, Should be used for Quarters for Attendants.; The East and West wings of main building, shown as No's. 2 & 3,are to be considered as a part of No.1 in the remodeling.

The heating apparatus should be located in the basement of No.1 and radiation extended to No.5.only.

In connection with the possible remodeling of this plant,it is here notedthat, The original drawings for the buildings on the reservation,were found on the files of the Custodian,at the U.S.Post-Office Building,and for Office convenience,a full set of blue prints was made and forwarded to the Supervising Architect, from Cincinnati,for his files.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(I) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A.)
Total estimated cost of work recommended, $18,000.00

(2) Appropriation for Mechanical & Electrical Equipment for Public Buildings.
(for details see appendix B.)
Total estimated cost of work recommended, $2,000.00

(3) Legislative Appropriations for New Construction.
(for details see appendix C.) none.

(4) Appropriation for Administrative Equipment.
(for details see appendix D.)
?.

TOTAL _____ $20,000.00

(5) Personnel.

Adequate, (?)

It is natural that no provision need be made for the care of patients, as for the investigation of their ailments, in a district where there is plenty but all local hospitals are central, so it proceed for financial year.

(2) Demolition of Council Land.

The necessities necessitate at one and one half acres, at utilisation and will provide future works. Some of it should be disposed of.

(3) Public Development or Improvement Schemes.

All road improvement schemes should be reviewed from the treasury. The latter buildings should be completed in order to meet the requirements of the place of dwelling now being partly used, with the possible exception of substantial Town Council of Lutterworth operations, and be a backgrounds for civic investigation and future.

The present Township existing, i.e., should be extended the industrial and Executive Offices, the Site for storage of heavy equipment for Civic Work. The Employment Office for Lutterworth, etc.; should be made for Economic Development, the Best are less stage of work training. Among in Tuf's. 2.4.5, are to be provisioned on a part of G.1 in the proposals.

The housing expenditure should be located in the Economic at G.1 and provision should be in 3.1.2.

In accordance with the provisional transferring of this class, it is now proposed, the original Township for the building on the Preservation, Among on the lines of the Overhead, or the 3.Tuf-Civic Building, the Public Office, which, all of the Public are made and Investment in the Improvement Housing Investment, from Chairmanship has Plan.

II.

STATE OF PROPOSED INVESTMENT SCHEMES.

(1) Appropriation for Towns and Transportation of Public Buildings.
(for details see appendix A.)
Total estimated cost of work (approximate). £1,000,000

(2) Appropriation for Demolition & Industrial Development for Public Buildings.
(for details see appendix B.)
Total estimated cost of work (approximate). £5,000,000

(3) Implementing Appropriations for the Construction.
(for details see appendix C.) [illegible]

(4) Appropriation for Residential Development.
(for details see appendix D.)

TOTAL ---------- £20,000,000.00

(5) Contingency.

III.

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(I) Buildings in General.

Building number 1. Executive Building, Two stories and Basement, brick superstructure, Wood cornice, Tin roof with Cupolas, non fireproof. Plastered walls and ceilings, Not painted. Pine base and Trim, Painted, 6" D.& M. hard pine floors, Not painted. Basement has brick paved floors, plastered walls and ceiling. Pine base and trim, painted. Steam and fire place heat, Gas light. floor area 6864 square feet, condition fair.

Building No.2. West wing of Main building. (Old operating room and Pharmacy) One story brick superstructure, & basement, Brick cornice, Slate roof with metal skylight, Plater walls and ceilings, not painted, Pine base and trim, Painted; D & M hard pine floors, not painted. No heat, Gas light, Floor area 800 square feet, Condition fair.

Building No.3. East wing of Main building, (Old kitchen and pantry) Two story and basement, Brick superstructure, Tin roof. Basement unfinished, has dirt floor; Plaster walls and ceilings, not painted; Pine base and trim, Painted. 6" D. & M. Floors, not painted. Steam and stove heat; Gas light; Floor area 1200 square feet, Condition fair to poor.

Building No.4. Surgeons Residence, (unused and uninhabitable) Two story wood framed, on one story brick foundation, giving two stries and basement; clapboard exterior; Tin roof. Plaster walls and ceilings, not painted; Pine base and trim Varnished; D.& M. Hard pine floors, not painted; Steam and fireplace heat, Gas light, Floor area 4292 square feet; Condition, Beyond economical repair, heating and lighting equipment has nearly all been removed from the building.

Building No.5. (Old Out-Patient Office) now unused. Two strory brick superstructure, (forming part of retaining wall of lot) Tin roof with ventilator, Plaster walls and ceilings; not painted; Pine base and trim, Painted; D. & M. pine floors, not painted. No heat; Gas light; Floor area 920 square feet. Condition, Fair.

Building No.6. West Ward: One story wood frame, one one story brick basement, (with sub-basement under one end, for heating apparatus) Clapboard exterior, Tin roof; Plaster walls and ceilings, not painted; Pine base and trim, Painted; D. & M. Pine floors, not painted; Steam heat; Gas light; Floor area 8048 square feet. Condition, beyond economical repair, Plaster nearly all down, windows all broken out and boarded up, heating equipment stripped out. and in a general state of decay.

Building No.7. East Ward Building. One story wood frame, on a one story brick basement; Clapboard exterior; Tin roof; Plater walls and ceilings, not painted; Pine base and trim, painted; D. & M. Pine floors, not painted; Steam heat, Gas light; Floor area, 5648 square feet, Condition, similar to No.6.

Building No.8. Barn. One story Brick superstructure; Tin roof; No interior finish or paint ; D. & M. Pine floor in carriage room, dirt floors elsewhere. No heat; No light; Floor area 1492 square feet; Condition, fair.

(1) [illegible]

[illegible]

[illegible]

[

(2) Offices.

Two rooms on the West side second story of Building No.1, and one room on the first story, West side.

(3) Visitors Reception Room.

None, None needed.

(4) Examination Room.

None, None needed.

(5) Kitchen and Diet Kitchen.

None, None needed, Old kitchenin east wing of building No.1, has been converted into a store room for Laboratory supplies.

(6) Pantry and Food Storage.

None, None needed under present conditions.

(7) Store Rooms.

Four rooms on first story of building No.1 is now used for general storage of supplies and equipment.

(8) Quarters for Officers.

None, and none needed under present conditions. Surgeons residence and all quarters originally provided in buildings No's. 6 & 7 are now useless for any purpose.

(9) Quarters for attendants.

One room in east portion of first floor of building No.1, is used for the attendant Engineer Janitor, the only employee living on the reservation. This room should be made available for Laboratory uses and quarters provided for the attendant by the remodeling of building No.5.

(10) Patients Dining Room.

None, None needed under present conditions.

(11) Interns & Officers Dining Room.

None, None needed, under present conditions.

(12) Attendants Dining Room.

None, None needed. Attendant boards himself.

(13) Recreation & Smoking Room.

None, None Needed.

(14) Disinfecting Facilities.

There is a Kinyoun Francis double ended Steam Sterilizer, with Formalin Ammonia Attachment, located in the sub-basement of building No.6, which is no longer required at this station, and which is in very good condition and might profitably be removed to either Chicago, Ills. or Evansville, Ind. where such equipment has been recommended.

(15) Incinerators.

There are none. A water heating incinerator should be installed in the present (old) kitchen of building No.3.

(16) Disposal of Soiled Linen.

None, None needed.

(17) Laundry Facilities.

None, None needed.

(18) Operating Room & Dressing Room Facilities.

Building No.2. was built for and equipped as an operating room, but no such facilities are now required. There is no Dressing room, and none is needed.

(19) X-Ray Facilities.

None, None needed.

(20) Laboratory.

Two rooms in the East portion of the second floor of building No.1 now serve the purpose, but are not convenient, by reason of conditions inherent in the construction of the building, which needs remodeling to properly provide the conveniences necessary for the large amount of laboratory work done. The entire East portion of building No.1 and two stories of building No.2. should be devoted to laboratory uses.

(21) Dispensary.

None, None needed; Building No.5. originally served this purpose.

(22) Wards for Seamen.

Wards for Seamen were originally provided in buildings No's.6& 7, both these buildings are now useless, but no need for such service prevails and the present buildings mentioned should be removed.

(23) Quiet Wards.

Formerly located in buildings No's.6 & 7, None are now required.

(24) Wards for Revenue Cutter Service.

None, none needed, were formerly in buildings No's.6 & 7.

(25) Toilet Facilities.

Toilet facilities except in building No.1, are out of commission; and are useless; Building No.1, contains one standard porcelain closet with high tank, one porcelain lavatory bowl set in marble slab with back, which are located in an alcove of the front hall second story, and are inclosed by a D. & M. partition about 7'-0" high, there is also an old bathroom in building No.3. which is out of commission.

Building number 1 need entire new plumbing and heating equipment. and building number 5, if remodeled for attendants quarters, should have a lavatory.

(26) Portable Tubs.

None, None needed.

(27) Padded Cells.

None, None needed.

(28) Necropsy Facilities.

None, None Needed.

(29) Isolation Facilities.

None, None needed.

(30) Out Patient Office.

None, None needed; Building number 5 formerly supplied this need.

(31) Floor Space.

Building number	1.	6864	square	feet.
" "	2.	800	"	"
" "	3.	1200	"	"
" "	4.	4292	"	"
" "	5.	920	"	"
" "	6.	8028	"	"
" "	7.	5648	"	"
" "	8.	1292	"	"
TOTAL		29044	"	"

No effort has been made to classify the floor space as in regularly operated hospital buildings, as same seems of no value. Floor space may be obtained from building floor plans if desired for any purpose.

(32) Bed Capacity and Space Allowed.

Bed capacity in ward buildings has not been computed, for the reason that these have been abandoned, and such service is no longer required.

(33) Relief Afforded and Cost.

No relief is now afforded.

(34) Ambulance Service.

No ambulance service is now provided.

(35) Heating, Power plant and Ventilation.

All buildings on the reservation except Number 5 and 8 were formerly heated by direct steam radiation,supplied from a battery of three return tube boilers,in brick setting, and located in the sub-basement of building number 6; this plant has been disconnected from all buildings but number 1,2 & 3, and two of the boilers are out of commission, and are not fit for further use;

The radiation in the other buildings has been partially removed for the purpose of repairing damaged portions of the service retained in use.

If the plant is to be retained in use as at present, a new heating plant should be installed in the basement of building number 1. sufficient only for heating buildings numbers 1,2,3 & 5. Space and chimney connections for boiler is available as well as convenient coal storage room with side walk manhole.

There is no power plant now needed, and the present equipment is not capable of producing pressures over 35 to 40 pounds,with safety.

There is no ventilating system, ventilation is by windows and doors, which is ample.

(36) Illumination.

All buildings except the barn were originally piped for and lighted by gas,supplied from a city plant, Gas mains are located in both Third and Kilgore streets, The gas furnished is artificial. Electric lights should be supplied.

(37) Decoration.

The buildings in use have painted wood trim,only, no attempt has been made to decorate any portion of the buildings,or apparently ever had been.

(38) Telephone & Call Service.

There is one Bell Telephone,with one desk extension,which appears to be ample for present needs. There is no call system and none is needed.

(39) Ice & Refrigerating Facilities.

None and none are required.

(40) Water Supply and Fire Protection.

Water for house use and fire protection are supplied from City mains located in both Third and Kilgore Street, at about 49 pounds pressure, There is a ONE inch connection from the Kilgore street 8" main for house uses,and it appears that there is also a connection from the Third street main to two Fire Hydrants located within the property. beside which there is no fire pro-

tection,except Two- three gallan underwriter type fire extinguishers,located, one on each floor of building number 1.

(41) Fire Alarm System.

There is a call box located in the adjoining blocks on both Third and Pearl streets,which seems adequate for present conditions.

(42) Sewer & Other Drainage.

Sewerage and other drainage is taken care of through a 6" main from the reservation to a 12" sewer on Kilgore street,which is ample for all needs.

(43) Streets, Roads, Walks, Fences and Grounds.

There are paved streets on three sides of the reservation; Third street has Cobble stone paving,Granite Curbing and Brick sidewalks, Kilgore street has Cobble stone paving,Granite curbs and a 5'-0" Board walk, Pearl street has Belgean block paving,Granite curbs and Brick walks,all ni fair condition.

Roads: There is a Macadam driveway into the grounds from Third street giving access to all buildings except numbers 6 & 7,and is ample and in fair condition.

Walks: A Brick walk with stone steps ascends the terrace from Pearl street, A brick walk and stone steps from Kilgore street,and a Flagstone walk connects buildings numbered 1,2,3,4,5,& 8,Buildings 6 & 7 are connected with covered passages to building number 1.All walks are in fair condition.

Fences; There are retaining walls and fences on three sides of the lot and a Board fence and several buildings make up the fourth side enclosure.
Third stree has about two thirds inclosed by retaining wall and the balance with a wrought iron picket fence with driveway entrance gate, Kilgore street, has a masonry retaining wall the entire length,which is cracked near the center,and bulged out,and needs repairing. Pearl street has an Iron picket fence surmounting a two foot high retaining wall, there is a pedestrian entrance gate in this fence. The East side has a board fence part way and buildings on the lot line the balance. The fences all need cleaning and painting.

Grounds: The grounds are well laid out but have been neglected and now need a general overhauling and cleaning up.

(44) Wharves, Seawalls Etc.

None, No water front.

(45) Livestock, Vehicles Etc.

None, None required.

(46) Personnel.

Special for this branch of the service, Has no comparison in Hospital work performed at other stations.

(47) Records.

None, No hospital service rendered.

(48) Books.

None. No hospital service rendered.

(49) Purchase of Supplies.

None. No subsistence furnished.

APPENDIX-A.

Appropriation for Repairs and Preservation of Public Buildings.

* *

Repairs mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	
III. - 1.	Remove buildings numbered 4,6 & 7.	$ 500.00
1.	Remodel buildings numbered 1,2,3,5 & 8 to plans approved by P.H.S.	17,000.00
43.	Repair Retaining wall on Kilgore street boundary.	500.00
	TOTAL -	$18,000.00

APPENDIX-B.

Appropriation for Mechanical & Electrical Equipment for Public Buildings.

* *

Repairs mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	
III. - 35.	Remodel plumbing equipment for buildings 1,2,3,& 5.	400.00
35.	New heating apparatus in buildings 1,2,3,& 5.	1,000.00
36.	Install electric light service in buildings 1,2,3,& 5.	600.00
	TOTAL -	$2,000.00

APPENDIX-C.

New Construction.

* * * * * * * * *

Items hereunder require Legislative Appropriation, and are recommended in the order of their relative importance.

Paragraph of report.	ITEMS	
None.		None.

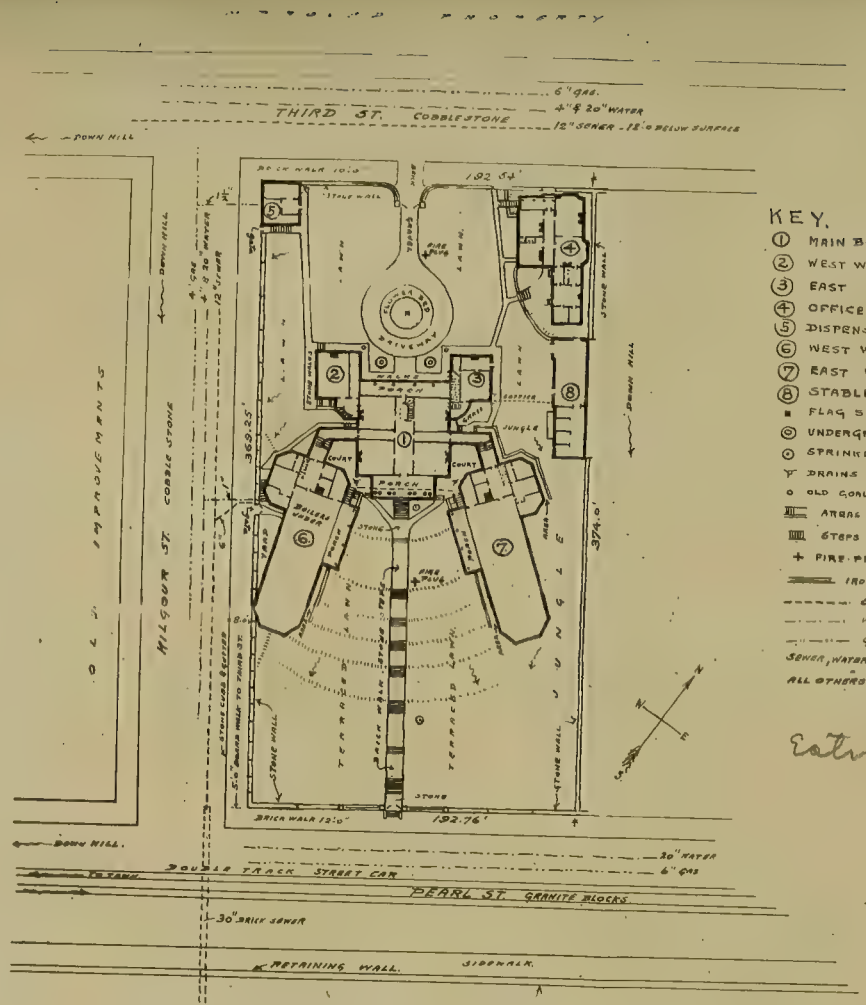
APPENDIX-D.

Administrative Equipment

* * * * * * * * * * * *

Items hereunder for Administration equipment to be furnished by the Public Health Service, which should be immediately supplied.

Paragraph of report.	ITEMS	
Unknown		Unknown.



KEY.

①	MAIN BUILDING.	BAS & 2 STORIES
②	WEST WING OF MAIN BUILDING	1 STORY
③	EAST " " " "	2 " "
④	OFFICERS QUARTERS.	2 "
⑤	DISPENSARY	BAS & 1 "
⑥	WEST WARD. (BOILER ROOM UNDER)	" & 2 "
⑦	EAST WARD.	2 "
⑧	STABLE	1 "

- FLAG STAFF
- UNDERGROUND CISTERNS (2 ONLY)
- SPRINKLERS. (2 ONLY)
- DRAINS
- OLD COAL HOLES (2 ONLY)
- AREAS & STONE STEPS.
- STEPS
- FIRE PLUGS (2 ONLY) NOW DISCONNECTED
- IRON FENCE ON STONE WALL.
- SEWER.
- WATER
- GAS.

SEWER, WATER & GAS SERVICES SHOWN ARE THE ONLY ONES NOW USED ALL OTHERS SEEM TO BE ABANDONED.

Estimated tent capacity
None

U. S. MARINE HOSPITAL
CINCINNATI OHIO. (ABANDONED)
BUILDINGS ① ② & ③ & BOILER ROOM UNDER ⑥ ARE NOW OCCUPIED TEMP. BY "OHIO RIVER INVESTIGATION" PUBLIC HEALTH SERVICE. OTHERS ARE DILAPIDATED & BOARDED UP. Richard Sowerby Supervising Supt of Grounds
Scale 1" = 50 feet.
Aug 1914.

VIEWS OF
U·S·MARINE·HOSPITAL·

CINCINNATI, O.

ADMINISTRATION BLDG. FRONT.

GENERAL VIEW FRONT.

ADMINISTRATION BLDG. REAR.

ADMINISTRATION BLDG.

GENERAL VIEW ADMINISTRATION BLDG.

MARINE · HOSPITAL ·

CINCINNATI · OHIO ·

SURGEONS · RESIDENCE · OLD ·

SURGEONS · RES · & OUTPATIENT · OFFICE

OUTPATIENT OFFICE & SURGEON'S RES.

PHARMACY · & · OPERATING · BLDG ·

STABLES ·

PRESENT · LABORATORY · ROOM ·

GENERAL · OFFICE · ROOM ·

PRESENT · LABORATORY · ROOM ·

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

CLEVELAND, OHIO.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

U. S. MARINE HOSPITAL, CLEVELAND, OHIO.

Report of inspection made November, 1914, with recommendations as to policy to be pursued.

I
GENERAL CONSIDERATIONS.

(1) Location.

The hospital reservation at Cleveland is located on a portion of Lake Erie Water front within the city of Cleveland, comprises about 8.57 acres, is somewhat quadrilateral in shape and is bounded on the north by Lake Erie, on the south by Lakeside Avenue, on the east by East 9th Street and on the west by Lakeside Hospital. The grounds are spacious, have a decided slope toward the water front, are well sodded at the front and sides, but uncared for on the slope facing Lake Erie. A few trees and flower plots are placed on the side facing Lakeside Avenue and five trees are placed at intervals about the buildings. An iron fence surrounds the property on the north, west and south sides and on the east is a retaining wall and fence, owned by the Lakeside Hospital

The tracks of the New York Central and Pennsylvania Railroads and allied lines pass along the lake short at the rear of the hospital and the smoke and noise produced by these agencies have greatly impaired the usefulness of this property for hospital purposes.

The building is located about the middle of the level portion of the reservation, faces nearly south, on Lakeside Avenue, is built in the form of an "H", is constructed of cut stone and consists of three stories and an attic formed by a mansard roof and surmounted by a central cupola. It has glass inclosed porches on the north and south sides of the buildingon each story. Additional buildings are a brick building, to the east and connected by corridor to the main building, a frame building, octagonal in shape, one story in height, at the south west corner of the main building, a power house at the rear of the building to the north and a small building used as a paint shop and isolation house, and a one story building erected for isolation purposes, and now used for attendants' quarters.

(2) History.

In 1835 efforts were made to establish hospitals for the care of seamen of the merchant marine, along the Great Lakes and on the western rivers. On March 3rd, 1837, Congress passed a bill authorizing the President "to select and cause to be furnished for the use and benefit of sick seamen, boatmen, and other navigators on the western rivers and lakes, suitable sites for marine hospitals, provided that the number thereof shall not exceed for the Mississippi River, three, for the Ohio River, three, and for Lake Erie, one."

In 1842 a site was selected and purchased at Cleveland, Ohio, on the lake front, where the hospital now stands, for the sum of $12,000.00.

An appropriation of $20,000.00 was made by Congress and the erection of the building was begun in 1844. Nothing further than the foundation of the building was done until 1850 when $8,000.00 was appropriated for "completing the Marine Hospital, at Cleveland" and $5,000.00 for "grading and piling the lake front." The building was finally completed and occupied but at a final cost of $87,[illegible].66 and this with the cost of the grounds, fences, including walls, etc., made a grand total of $119,291.84. The building was first occupied in November 1852.

During the Civil War a portion of the building was occupied by the Soldiers' Aid Society which occupancy ceased at the termination of the war.

On October 1st, 1875, the building was leased by the Secretary of the Treasury, under authority of Congress, to the Lakeside Hospital Corporation for a period of twenty years at the nominal sum of $1.00 per year, the above named Corporation to care for, during that period, all service patients ate the rate of 64 cents per day, exclusive of medical attendance.

During the time the building was leased by the Lakeside Corporation, they build a large brick structure at the east end of the main building which they used as an amphitheatre for clinical lectures and in the basement was located a laundry and attendants quarters, also an octagonal shaped one story building to the southwest, of wood, which wasused as a children's ward; also a frame boiler house at the rear of the main building, and an isolation building or pest house. When the lease expired on October 1st, 1895, the lessees obtained an extention of six months to enable them to complete their new hospital, which adjoins the Marine Hospital on the east side of the reservation. On April 1st, 1895, the Lakeside Hospital Association vacated and the service resumed control.

(3) Need for a Marine Hospital.

As Cleveland is one of the largest and most important lake ports and relief for sick seamen has been given by the Government at this station since 1852, it is reasonable to expect that it will continue for years to come and that a hospital for the care of such subjects is a necessity.

(4) Adequacy of Plant.

Except for quarters for attendants and officers, the present plant has sufficient bed capacity for the total number of patients applying for treatment.

The buildings are very old, structurally bad, and impossible of rearranging to meet demands for modern hospital. The site is so menaced by smoke and noise from the railroads and the land is so valuable for commercial purposes as to make it most undesirable as a location for a hospital plant.

It is recommended that the present plant be sold and that a modern hospital of 100 maximum bed capacity be erected in a more desirable location.

The estimated cost of such a plant including hospital equipment, land and accessary buildings, is $500,000.00.

(5) Acquisition or Disposal of Land.

This property contains 8.57 acres, bounded on two sides by public streets on one side by abutting property, and the fourth side is water front, with riparian rights. 6.5 acres of the land is under fence. A right of way for railroad purposes only, has been granted on part of the land between the fence and the water front.

The property is larger than is needed or desirable, and has become too valuable for marine hospital purposes by reason of civic improvements of the City and County, and could be sold for a sum that would justify building a modern plant on a new site preferably near Tillman Avenue and 45th Street, which is more convenient to the shipping district. This would leave a large balance which could profitably be utilized in rehabilitating other marine hospitals.

It is recommended that this property be sold and that the proceeds be made available for marine hospital purposes at Cleveland and elsewhere.

Based on painstaking investigation it is estimated that the property now under fence is worth $750,000.00 to $800,000.00 to cut up into building lots alone, but it is also understood that the City of Cleveland desires to extend its improvements to take in this property, and that the railroads now holding the rights of way above mentioned desire to locate extensive terminal facilities that would cover these and many additional acres of lake front.

In fact these projects have gone so far as to have been worked out in detail as indicated by drawings hereto attached, which seem to justify the belief that the property is very much desired and therefore unusually valuable.

It is noted that by Act of Congress, February 14th, 1853, (10 U. S. Statute 754) a right of way across the hospital reservation was granted to the Cleveland and Pittsburgh Railroad Company and the Ashtabula Railroad Company. The act requires the railroad companies to furnishe such shore protection as may be prescribed by the Treasury Department, and provides also that whenever the roads shall be discontinued, or abandoned, all rights shall cease. No riparian rights were granted to the railroads.

These rights of way are located about 34 feet north of the fence near the lake front and extend 120 feet to an average distance of 25 feet from the shore line of the lake.

The water front is leased to the Cleveland Yatch Club until 1921. The site on which the Club House now stands is beyond the original shore line on land filled in prior to October 1908. This club has recently acquired a site elsewhere and intends shortly to move the present building.

The Treasury Department has given permission to the City Authorities to utilize a part of the area in front of the shore line of the hospital reservation as a spoil dump and has likewise allowed the Engineer Department of the Army to construct a wharf, and to fill in in front of its property for

a depth of 230 feet, at a distance of 1000 to 1200 feet from the shore.

The area where other filling has been authorized, extended from the area occupied by the Army to within 250 feet of the original shore line for a width of 550 feet. The permission given by the Government is with the understanding that the City or other parties shall have no claim to any of the made land in front of the hospital reservation. At the present time about 90% of the area where filling has been authorized, has been raised to approximately 8 feet above the water level. This is indicated on the attached plan.

If the entire area in front of the hospital reservation is reclaimed and the space now occupied by the Army, definitely assigned to them, there would remain approximately 15 acres of made land increasing the Government's property from about 8½ acres to approximately 23½ acres.

The original hospital reservation is estimated to be worth from $800,000.00 to $1,000,000.00, exclusive of the right-of-way granted to railroads. The made land should be worth, for either city or railroad improvements alone at least $1,000,000.00, making a total of not less than $1,800,000.00.

In order to make the present riparian rights as valuable as above indicated it will be necessary that the Harbor line in front of the property be established by the War Department. The proposed harbor line has been tentatively fixed as indicated on the enclosed blue print, which was supplied by the Engineer Office of the War Deprtment at Cleveland. When this is done the available land belonging to the reservation will be more than doubled in area. The estimated value of these riparian rights is based on the proposed railroad or city improvements alone and is supported by values claimed by the City of Cleveland relative to a recent decision of the U. S. SupremenCourt.

On November 17th, 1914 the United States Supreme Court decided in the case of the fill, made by the railroad companies, along the waterfront, owned by the City between the original shore line and the harbor line, that the made land belonged to owners of the waterfront. (In this case, the City.)

Any reclaimed land between harbor and shore lines in front of the hospital reservation undoubtedly would belong to the Government. The harbor line has not yet been established but will probably be approximately where the wharf of the Engineer Department of the Army is located, certainly not nearer the shore.

These conditions suggest the desirability of having the harbor line established, and the extended property lines clearly defined before selling any of this property.

It appears that one of the railroad's right of way has been encroached upon by the installation of a spur track between the original right of way next to the hospital as shown in the photograph No.5, on first page of the views herewith, and the yard fence. But this could not be confirmed as there were no records to show that authority therefor had not been granted.

(6) <u>Future Development or Disposal of Plant.</u>

The site is objectionable for the reasons given under paragraph 4, sec-

tion I, and, as it is so valuable for other purposes, it should be sold and a new hospital erected on the west side of the harbor adjacent to the shipping interests.

The immediate construction of a modern hospital plant of 100 maximum bed capacity on a new site has been recommended. It is believed that such a plant will meet the needs of the station for a considerable period.

II
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * * *

(1)	Appropriation for Repairs and Preservation of Public Buildings. (for details see appendix A) Total estimated cost of work recommended.	$1225.00
(2)	Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)	500,000.00
	Total estimated cost of work recommended.	1,900.00
(3)	Legislative Appropriation for New Construction. (for details see appendix C) Total estimated cost of work recommended,	500,000.00
(4)	Appropriations for Administrative Equipment. (for details see appendix D) Total estimated cost of items recommended.	1,603.00
		$504,728.00

(5) Personnel.

Adequate.

III
DESCRIPTION OF PLANT & IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * * * * * * *

(1) <u>Buildings in General</u>.

Building No. 1, Main Hospital, English basement, two stories and unfinished attic, stone superstructure painted, pine base and trim painted, First story veranda and operating room has terrazzo floor, second story verandas have porcelain tile floors, kitchen has ceramic tile floor. All other floors are 3¼" D & M pine. Building is heated by steam. Electric and gas lights. Floor area 18,058 square feet.

The superstructure is sound and free from settlement cracks. A false roof has been build over the original to provide air and storage space. All interior trim is in very poor condition. Many of the doors have been rehung so many times that they need renewing if the building is to be continued in service for a considerable time.

Building No. 2, Ward and Laundry Building, two-story brick superstructure, slate roof, plastered walls and ceilings not painted, pine base and

trim, painted, laundry room floor cement, all other floors 3¼" D & M hard pine, steam heat, gas and electric light. Floor area 4,260 square feet.

Building No. 3, Sterilizing and Storage Building, two story brick superstructure, tile roof, plaster walls and ceilings painted, porcelain tile floor in sterilizing room, 3¼" D & M pine elsewhere, steam heat, gas and electric light. Floor area 664 square feet.

Building No. 4, Power and Heating Plant, two-story brick superstructure, tar and gravel roof, no interior finish except walls are painted, first floor in pit under grade has brick pavement, second floor 3¼" D & M pine, boiler heat, gas and electric light. Floor area 2964 square feet.

Building No. 5, Attendants' quarters (Isolation building), one-story, wood frame, on brick foundation, clapboard exterior, shingle roof, plastered walls and ceilings, pine base and trim painted, 3¼" D & M hard pine floors, steam heat, gas and electric light. Floor area 1620 square feet.

Building No. 6, Necropsy and Paint House, one-story, wood frame, on brick piers, ruberoid roof, planed boards and battens exterior, plastered walls and ceilings, pine base and trim painted, 3¼" D & M floors, no heat, no light, poor condition and unfit for necropsy purposes should be removed. Floor area 357 square feet.

Building No. 7, Pharmacist's Quarters, one-story, wood frame, on brick piers, clapboard exterior, shingle roof, plastered walls and ceilings painted pine base and trim painted, 3¼" D & M hard pine floors, steam heat, gas and electric light. Floor area 1436 square feet.

None of the above buildings are worth spending more money on than is absolutely necessary to keep them in repair until others are supplied.

(2) Offices.

Surgeon's Office.

Located on the south side of the second floor adjoining the portico on that side, is a good sized room but rather dark for office purposes. It is adequately furnished but needs new files for clinical histories, card index system and rugs.

Pharmacist's Office.

Located on the second floor opposite the Surgeon's office, is sufficiently furnished but needs a Webster's Dictionary and stand and some small rugs. This room is also dark for office purposes.

(3) Visitors' Reception Room.

This is placed at the head of the stairway on the west side of the second floor and also serves as a library for books contributed for the use of the patients. It is of sufficient size and does not need anything but a sectional bookcase.

(4) Examination Room.

Outpatient office is used for this purpose. See Paragraph 30.

(5) Kitchen and Diet Kitchens.

The kitchen is on the first floor, faces the east side of the building, is large enough and sufficiently equipped for present needs. Some new aluminum ware is needed. There are no diet kitchens. One is needed and this could be installed at small cost in the hall on the northeast side of the third floor adjoining the smoking room. A gas range with warming table and necessary utensil equipment is all that is required.

(6) Pantry and Food Storage Rooms.

A pantry for dishes adjoins the kitchen and also a room for the storage of supplies. They are sufficient for the present needs.

(7) Store Rooms.

Rooms for general storage, medical supplies, glassware and groceries are located on the east side of the first floor and are ample for the needs of the building.

(8) Quarters for the Officers.

There are no quarters for commissioned officers.

Acting Assistant Surgeon and Internes' Quarters.

These consist of one bedroom each, located in the southeast wing on the second floor, a room directly opposite, used as an office and living room, an adjoining bath room and a toilet at the east end of the hall. They are fairly furnished but require two desks, revolving chairs and four upright chairs to replace those worn out and unserviceable. Two bath room rugs 36 x 72 are also required.

Pharmacists Quarters.

These are located in the wooden one story octagonal building built by the Lakeside Hospital Association for use as a children's ward. They consist of a sitting room, dining room, four bed rooms, kitchen and bath room. They are adequately furnished and only minor repairs to the furniture are needed.

(9) Quarters for Attendants.

Nine attendants have quarters in the hospital building, three on the first floor, two on second, and four on the third, and seven are quartered in the isolation building on the east side of the main structure. The quarters for all of these attendants are comfortably furnished but some rugs and wardrobes are required to complete the outfit.

(10) Patients' Dining Room.

Is located on the first floor adjoining the kitchen, is adequately furnished, and sufficient for present needs.

Subjections cannot be used for any purpose. The Paragraph 2.

(2) Kitchen and Food Preparation.

The kitchen is on the first floor. There are seven cooks at the moment, in large overall-dress and industrial aprons for personal protection. They wear clean dress in towns. There are no dirty dishes. The lay-out is such that it would be impossible or useless to the SMLC on the Jerusalem site for the staff dining room to be placed in another room. A lift works with another block and some-way-distant employees hardly ever use it.

(3) Toilets and Hot Water Taps.

A penalty for leaving soiling the lavatory and also a room for the attendants. They are satisfactory for the present needs.

(4) Linen Room.

Linen for personal washing, medical supplies, dressings and medicine are located in the main ward of the first floor and are supplied by the building.

(5) Washing Up Rooms.

There are no washing for washing-up utensils.

Kitchen Equipment and Utensils.

There consists of one lavatory sink, located in the treatment ward on the ground floor, a room without apparatus, used as an office and Sister's room, is adjoining with room and a bathing cubicle with an air-lock. They are fairly functional. The regular use sanitary, functioning sinks are kept clean. Sinks are in a fit and clean condition. The hot water system is adequate.

Refrigerating Machines.

These are located in the wards and are used as a children's ward. They are the Dunbrite Surgical Refrigerators for use as a children's ward. They are used to a sitting room, dining room, dormitory and treatment room. They are refrigerating machines and only minor repairs to the furniture are needed.

(4) Washing and Drying.

The washing is done by a commercial laundry, which is the distributor, and is passed, sterilized and returned. Washing and drying is done in the laundry building on the ground floor of the new extension. The washers for all medical clothing are mechanically disinfected by a steam sterilizer. The washers are required to complete the outfit.

(5) Children's Clothes Room.

In keeping in the Clear Children the Matron, is responsible for the maintenance, and maintenance the present needs.

(11) Interns' and Officers' Dining Room.

Is placed on the first floor to the right of the main entrance to the building, is ample for the purpose, and sufficiently furnished.

(12) Attendants' Dining Room.

This room is located next to the kitchen on the north side, is well furnished and adequate for the purpose.

(13) Recreation and Smoking Room.

One room on the north side of the third floor is set apart for this purpose. The porticos on the north and south sides of the building are also used by the convalescent patients.

(14) Disinfecting Facilities.

A Kinyon Francis steam disinfector is located on the ground floor of building #3, near the laundry, is provided with separate rooms for clean and soiled work. One Kny Scherer Dressing, one utensil and one instrument sterilizer in operating room, and one utensil sterilizer in the third story toilet room for tubercular and typhoid work, all in good order except instrument and utensil sterilizer in operating room, which should be replaced by new ones.

(15) Incinerators.

There are none. Infected dressings, etc., are burned under the boilers in boiler house. Garbage is removed daily by the City. A water jacketed coal burning incinerator should be installed.

(16) Disposal of Soiled Linen.

Soiled linen is removed from the ward in sanitary baskets. Suspected or infected linen is soaked in sol tion of bichloride of mercury and then sent to the laundry. Infected bedding and clothing is sterilized in the steam sterilizer adjoining the laundry.

(17) Laundry Facilities.

Laundry located in the first floor of the building #3, contains one O & S Vertical Steam Engine worn out and in bad condition. Two Troy Laundry Machine Co. Washers in good condition. One Troy Centrifugal Dryer in good condition. One 72" Troy Mangle, fair condition but too small in drying capacity. Clothes must be run through three times to properly dry them. One two track steam dryer with three racks in good condition. Should have four racks to save time and steam. Washing room has cement floor in fair condition. Ironing and drying rooms have H. P. floors in good condition. Recommend discontinuing engine and install 12 H. P motor and larger mangle.

(ii) Lavatory and Cloakroom Floor Space.

In placed on the first floor in the right of the main entrance in connection, is ample for the purpose, and satisfactorily furnished.

(iii) Lavatory Floor Space.

This room is another small in the floorway on the ground floor, is fairly furnished and adequate for the purpose.

(iv) Conversion and Repairs Need.

The room on the north side of the first floor is not equal for this purpose. The problems on the north and south sides of the building are also used by the conveniences provided.

(v) Cleanliness Facilities.

A Hippo Washing plant has already been installed on the ground floor of building #3, near the boiler, in readiness with separate venue for clean and soiled ware. The Dairy Engineer Foreman, has charged all the factory and ancillary to operating room, and has general supervision to the clean water tanks from the refrigerator and cleaned ware, all is good error cleanings instruments and general structure in operating room, which should be replaced by new ones.

(vi) Refrigeration.

There are some. Interior dimensions, etc., are between other the main parts in boiler house. Storage is required small in the city. A better position exist between refrigerator stores in installed.

(vii) Channel or Boiler Lines.

Boiler lines is removed from the most is machinery lacunae. Supplying or laboratory lines in bodies in mainness of installations of machinery and the most to the laundry. Interior mechanical stopping is available by the steam ventilation or heating the boiler.

(viii) Factory Facilities.

Factory Jobbing in the First Floor of the building #3, previous and G & E Vertical Press figure are not in the job activities. The Dry Lubricants Machine Co. Machine is good condition. The Year Intermediate Dryer is good condition. The "Dry Dodge" air machines for two week in strong operation. Cleaner and be and through Clean clothes is properly air dual. The Small steam dryer with large press, is good condition. Shelf make four racks to make that and areas. Although room for another dryer in fair condition. Inspection drying room lower, is dirty in good condition. Recommend thermometer heating and Dryer, 2 ft. 2 ft. and larger sample.

(18) Operating and Surgical Dressing Rooms Facilities.

Operating Rooms.

There is a good sized room for this purpose on the north side of the second floor, which has been used for several years. It has tiled floors and wainscot, and is fairly equipped. Many of the tiles in the latter are cracked and the sink is also badly defaced. A new operating table is required (the one now in use to be transferred to the out-patient office on the first floor.) More light and space are required for the operating room and this can be obtained by extention of one of the windows on the north side as recommended by Superintendent J. C. Elliott. The supply of instruments is sufficient but an electric cautery and a dressing table would be desirable. The cracked tile in this room could be replaced by Keen's cement.

Sterilizing Room.

Adjoins the operating room on the east side and is fitted with sinks, utensil, dressing and instrument sterilizers and is sufficient for present needs. It has a terrazzo floor.

Etherizing Room.

No special room provided. Patients are etherized in the sterilizing room, the dressing room and the operating room.

Washup Room.

No special room. Ablution performed in the operating room and sterilizing room. A portion of the latter could be used for the installation of a shower bath and sink for the surgeon's use.

Surgical Dressing Room.

Is a large room across the hall directly opposite the operating room. It is sufficiently furnished but a receptacle to preserve sterile dressings is needed.

(19) X-Ray Facilities.

No special room available for this purpose. There is a Kelly-Koeth Apparatus with an outfit sufficient for all superficial X-Ray work located in a portion of the dispensary. This apparatus has also a high frequency current. Deep visceral X-Ray work for this hospital is done at the Lakeside Hospital adjoining at a nominal cost of about $2.50 per case. A cabinet for holding X-Ray plates is needed.

Dark Room.

No room available for this purpose. When development work is necessary the windows of the dispensary are darkened by curtains of black rubber cloth, the sink in the dispensary used for washing purposes and the usual red light employed. The above is a temporary arrangement and answers the purpose for the time being.

(xx) Radiation and Associated Biological Hazard Possibilities.

Operating Room.

[illegible]

Electrotherapy Room.

[illegible]

Diathermy Room.

[illegible]

Medical Room.

[illegible]

Surgical Dressing Room.

[illegible]

(xx) X-Ray Facilities.

[illegible]

Dark Room.

[illegible]

(20) Laboratory.

This is located in a room in the northwest corner of the second floor. It is at present undergoing repairs, including the terrazzo floor, and has a sufficient equipment for ordinary clinical purposes. Repairs to the Leitz microscope, now in use, or a new instrument, a few reagent bottles and a miniature sub electric lamp for the microscope are necessary.

(21) Dispensary.

This is a large room on the east side of the main hall on the second floor and has been mentioned in connection with the X-Ray outfit. It is adequately furnished and in good condition.

(22) Wards for Seamen.

Second floor. There are 3 wards on this floor, of 4, 2, and 21 normal bed capacity. The largest ward is used for surgical cases, is open on three sides and is light and airy. The four bed wards are usually used for mates and the 2 bed wards for masters.

Third Floor. There are four wards on this floor, each with the normal capacity of nine beds.

(23) Quiet Wards.

There are no rooms specially set aside for this purpose. The two bed ward on the second floor can be utilized if necessary.

(24) Wards for Revenue Cutter Officers.

There is no room specially provided for this purpose and there is but slight demand for such facilities. If required a two bed ward on the second floor can be used for this purpose.

(25) Toilet Facilities.

Toilet facilities are poor and inadequate both as to number and location. Some repairs and improvements are in progress. A new sink in the surgical dressing room should replace the present cracked sink. No attempt to modernize these facilities is justifiable without an entire rearrangement of rooms, which is not warranted.

(26) Portable Tubs.

There is one tub fitted with a rack. It is in a serviceable condition and sufficient for present needs.

(27) Padded Cells.

For alcoholic and insane cases. No such room in building. One could be constructed in portion of the corridor or hall on the southeast side of the third floor. A grill partition, window and wall protection can be installed for about $200.00.

(xx) Laboratory.

This is located in a room in the northeast corner of the second floor. It is an general bacteriological laboratory, including for serology, blood, and has a sufficient equipment for ordinary clinical purposes. Results in the usual microscope, may be seen, as a rule overnight, a few days earlier and a catalogue not displayed also for the outpatients are considerably.

(xi) Dispensary.

This is a large room on the west side of the main building, [illegible] Minor and has been established in [illegible] with the X-Ray office. It is adequately furnished and in good condition.

(xii) Wards for Patients.

Ground Floor. There are 2 wards on this floor, of 6, 7, and 21 accommodation. The largest ward is used for surgical cases, in spite of its [illegible] and its light and bright. The [illegible] are usually used for medical and the 7 bed wards for maternity.

Third Floor. [illegible] and [illegible] are also used for maternity of [illegible].

(xiv) Toilet Rooms.

There are no rooms available and ready for this purpose. The [illegible] floor on the second floor can be utilized if necessary.

(xv) Wards for Patients Under Observation.

There is no room specially provided for this purpose and there is not, either room for such facilities. If required a bed would be set in the second floor one is used for this purpose.

(xvi) Medical Facilities.

Medical facilities are good and sufficient, as to medical and [illegible] [illegible]. Some medical and surgeons are in practice. I am sorry to the surgical assisting from [illegible] Dispensary the present arrangement. No attempt is made to undertake these institutions is practicable without [illegible] [illegible] of [illegible], which is not warranted.

(xvii) Financial Data.

There is not [illegible] with a [illegible]. It is in a satisfactory condition and sufficient for present needs.

(xviii) Medical Staff.

The [illegible] and [illegible] staff. No [illegible] room is [illegible]. One [illegible] to [illegible] at the [illegible] of [illegible] on the [illegible] side of the [illegible] floor. I will [illegible] [illegible] [illegible] [illegible] be [illegible] for about $200.00.

(28) Necropsy Facilities.

Are provided in one end of building #6. This room is small and poorly equipped, has plastered walls and ceilings and cement floor, without drain. It is also used as a detention ward which is very objectionable. New facilities are needed.

(29) Isolation Facilities.

The building designed originally for isolation purposes is now used as attendants quarters. Suspect cases are accommodated in the necropsy room. (See Paragraph 28) The majority of the contagious cases are cared for in the city hospital.

(30) Out Patient Office.

Is located in the southeast cornerof the building on the first floor, opposite the kitchen. It consists of one room and an adjoining closet. It is sufficiently furnished but one revolving and two desk chairs are needed, and as this room also serves the purpose of an examination room, a new burner and reflector for the lamp now used are needed. The examination table in this room is not suitable for some of the work done therein, such as cystoscopy, and if a new table is purchased for the main operating room as noted in Paragraph 18, the one now in use there can be transferred to this room.

(31) Floor Space.

Includes not only the original or main hospital building but the two story brick ward addition connecting the wing and the one story wood addition, the latter being used entirely as pharmacists quarters. They are referred to on data sheet as Buildings #1, #2, #3, and #7.

Total net floor space.	First Floor	7636	Square	feet.
" " " "	Second "	6427	"	"
" " " "	Third "	3948	"	"
		18,011	"	"
" " " "	Hall "	6,379	"	"
		24,390	"	"

Total net floor space for hospital uses.	62%
" " " " " Living quarters (except hall space.)	12%
" " " " " Hall space (including quarters)	26%
	100%

The main building No 1, has 18050 feet of net floor space divided as follows:

Hospital uses.	59%
Living quarters.	7%
Hall space	34%
	100%

(32) Bed capacity and space allowed

The total normal capacity of the hospital is 63 beds, maximum 72 beds,

On a normal basis each patient has 84 to 100 square feet of floor area and 1020 to 1080 cubic feet of air space except in the surgical ward. In the latter ward the ceiling height is 25 feet, the room being designed originally as an assembly hall. The floor area per bed is 105 square feet and air space is 2600 cubic feet.

(33) Relief Afforded and cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914, and also for the period from July 1st to October 31st for the calendar years 1913 and 1914.

	Fiscal years.			July 1 to. Oct. 31st.	
	1909	1913	1914	1913	1914
Number days hospital relief furnished	14846	10540	10343	3385	3014
Daily average hospital patients. -	40.67	28.75	28.33	----	----
Total daily cost per hospital patient	-----	$2.24	$2.24	----	----
Number of hospital patients.	494	423	433	----	----
Number of outside patients.	1270	1192	1575	----	----
Number of times treated.	2188	2399	2921	----	----

On November 19th there were 33 patients of whom 4 were chronics. Tubercular patients 2.

The hospital relief furnished in 1914 was substantially the same as in 1913 but 30% less than in 1909. For the first four months of the present fiscal year it was 10% less than for the same period of last year.

Since June 1911, the maximum daily number of hospital patients was 46, minimum 18.

Since January 1907, the year of the largest demand was the fiscal year 1908. During that year the hospital relief furnished totaled 16,191 days maximum daily number of patients 59, minimum 30, average 44.5.

(34) Ambulance Service.

Service is furnished under contract for $2.00 per round trip. Service is excellent and facilities adequate.

(35) Heating, Power Plant and Ventilation.

All buildings except paint shop portion of building No. 6, are heated by direct steam to wrought iron column radiators, having gravity returns. This service is operated at from 80 pounds under normal conditions to 100 pounds on days when steam is used for operating laundry engine, all of which is dangerous, particularly as the service pipes are old and liable to fail at any time with expensive results. The heating service should be remodeled to allow the pressure to be reduced to not more than 10 pounds, and a direct steam line run to laundry, the steam dry room and the present laundry. Engine should be superceded by an electric motor. Ventilation by windows and doors only.

(36) Illumination.

[illegible]

(b) [illegible]

[illegible]

Fiscal years. July 1 to.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	24646	1[illegible]60	2[illegible]42	2[illegible]5	2016
[illegible]	60.87	52.75	26.22	----	----
[illegible]	----	[illegible]	[illegible]	----	----
[illegible]	464	421	422	----	----
[illegible]	1277	1[illegible]8	1[illegible]6	----	----
[illegible]	2[illegible]4	4[illegible]7	2[illegible]1	----	----

[illegible]

[illegible]

(c) [illegible]

[illegible]

(d) [illegible]

[illegible]

(e) [illegible]

[illegible]

Combination gas and electric fixtures, drop cord and wall fixtures. Very poor as to type, wiring run in wood mouldings. Along ceilings and side walls and is in very poor and in some cases dangerous condition, due principally to plaster work which is continually falling and tearing loose the wiring system and exposing the building to fire danger by short circuiting. A number of fires and interruptions in the light service are already reported. This should be corrected immediately by running all wires in circular loom or steel conduits, exposed.

(37) Decoration.

All decorations to the walls and ceilings is done by the force at this station and is generally satisfactory as to color, the main colors being cream ceilings and buff sidewalls, but the majority of them need repainting.

(38) Telephone and Call Systems.

There is one direct connected city telephone, Bell system.

There is an old type intercommunicating system, 10 stations, 9 in use, connecting various parts of the main building and out-buildings. It has recently been repaired and is in a satisfactory condition. There is no bedside call system and none is needed under present conditions.

(39) Ice and Refrigerating Facilities.

Artificial ice is supplied to a large ice box built into the first floor of the main building which supplies all present needs.

No refrigerating system is necessary.

(40) Water Supply and Fire Protection.

Water is obtained from 6" city main in Lakeside Avenue. The city supply is obtained from the lake and is of good quality but is not filtered, although chemically treated. The water used for drinking is passed through a small filter in the hospital. The pressure is about 45 pounds, supply main 3". There are three hose reels within the main building, one on each floor and one in attendants quarters (Isolation Building). Each reel has 100 feet 1½" linen hose and nozzle. Reels an old type. There are 10 fire chemical fire extinguishers of the 3 gallon Underwriter type well distributed. There are no fire hydrants outside of the building but there is a high pressure city fire hydrant on the street directly in front of the hospital reservation. The city has a high pressure fire system separate from the service mains with pumping station opposite the hospital. City fire engine house is about five blocks away. Facilities are adequate for present conditions.

(41) Fire Alarm System.

There is a bell on the rear wall of the hospital which is struck by hand. Drills are held weekly.

Facilities adequate.

(42) Sewer and Other Drainage.

Conditions are now slightly improving, city and town and mill finances. They year ago or 1921, matters was in some confusion. Among municipalities with mills and in the very year was in some cases dangerous conditions, but generally in practically that which is predominately utility-the General Law governing electric and supervised the building of the shops by means of bonding. A number of towns and interpretations in the Joint service has already expired. This should be prevented immediately by passing bill before the selectmen have or other municipal officers.

(37) Generalities.

All generalities so the only not omitted is then by the form of the ability but is generally satisfactory so to which, the main points being which matters not left economically, but the majority of them need improving.

(38) Telephone and Bell System.

There is one Bell system, several city telephone, Bell system.

There is in all type independentialing system, 20 exchanges, 1 in city, connecting various parts of the more building and suburbanites. The recently been replaced and is in a satisfactory condition. There is no bandits bell system and this is needed under present conditions.

(39) Gas and Electricity Facilities.

Gas is supplied in a large one and bell from the first floor of the main building which supplies all general needs.

No refrigerating system is necessary.

(40) Water Supply and Fire Protection.

Water is pumped from the city and is insufficient for fire protection from the town and is of good quality but is not filtered. Change structurally broken. The water used for drinking is passed through a small filter in the basement. The pressure is about of pounds, mostly main by. There are three hose racks using the city hydrants, one on each floor and one in attendance quarter (Employee Building). Hose reels are not used. Hose is hose hose not needed. Hydrants on all type. There only 1 fire chemical fire extinguisher of the 1 gallon Chemicalier type well distributed. There are no fire hydrants around of the building but there is a fire pressure city fire hydrant on the street directly in front of the principal residence. The only has a fire pressure fire engine manning from the nearest station. Alarm boxes with pulling stations connected are installed. Only fire engine known to alarm fire stations are. Facilities are adequate for the present requirements.

(41) Fire Alarm System.

There is a bell on the fire hall at the Employee Building to alarm by hand. Fire is are bell weight.

Facilities Circuit.

(42) Sewer and Septic Tanks.

Sewer and storm water are taken care of in a combined system discharging through 12" terra cotta pipe into the city sewer in Lakeside Avenue. Facilities Adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

The property between Lakeside Avenue and the railroad tracks is inclosed on all sides by an iron picket fence, in fair condition. There are two driveway gates on Lakeside Avenue and one pedestrian gate. A gravel and clay road extends from both entrances to the front of the main building with a branch on the northeast side to the rear entrance, In good condition. A cement walk extends from Lakeside Avenue to entrance to main building. Other walks of wood are being replaced with old slate by hospital force. There is a cement street sidewalk along Lakeside Avenue and part of E 9th street, boundary in good condition.

The grounds in general present a neat and pleasing appearance. The present flagpole of iron pipe, guyed, is in the nature of a makeshift, and does not compare favorably with the surroundings.

(44) Wharves, Sea Walls, etc.

There are no wharves or sea walls. The original shore line was about 670 feet and in general parallel to Lakeside Avenue, but its present condition has been modified by filling in. A description of the present conditions will be found under Paragraph 5, Section I.

(45) Live Stock, Vehicles, etc.

There are no live stock or vehicles. Miscellaneous small tools, etc., are provided. There is a wagon scale in the rear of the main building.

(46) Personnel.

On duty at this station are the following officers:
One commissioned officer in charge, one acting Assistant surgeon, one interne and one pharmacist.

The attendants are one engineer, one fireman, three day nurses, one night nurse, 1 laundryman, 1 laundress, three hallmen, one messenger, one painter, two cooks and one pantryman. Total 16. The above named force is considered sufficient for the present needs of the station.

(47) Records.

The recordsof the station are properly kept and up to date. The clinical records are accurate and commendable.

(48) Books.

There are a few modern medicalbooks in the station library but the majority of these on hand are old and out of date.

(49) Purchase of Supplies.

Subsistence Supplies are purchased on yearly contracts and the service is satisfactory. The medical officer in charge and the pharmacist on duty

Water and sewage water are taken down at, in a central system discharge-
ing outside LIF Quay, into the sea, the city sewer in Dockyard Avenue.
Particulars Appendix.

(44) Electric Lighting, Boilers, Engines and Generator.

The property between Lamanlin-Avenue and the Diplomat Branch is lighted
on an all sides by an iron power lamps, in very condition. There are two
Electric Light on Dockyard Avenue and one Generation Quay. A gravel and
clay road extends from main entrance to the Front and has some Building with
a branch to the northwest side to the most entrance. In good condition.
A gravel walk extends from Laboratory Square to entrance to main building.
Other walks of less size extend northward with the above to Hospital Lane. There
is a gravel street extending from Laboratory Square and part of N. the entrance.
Boundary in good condition.

The grounds in general present a neat and pleasing appearance. The
present Diagonal of Drive right, proved, in the Delivery of a Schedule, and
does not conform Instantly with the arrangements.

(45) Electric, Gas Main, etc.

These are to observed at all seasons. In Artificial Light the main
air line and is general potential in Laboratory Square, but the present condi-
tion has been modified by fitting in. A description of the present condi-
tions will be found under Paragraph 5, Section I.

(46) Main Drain, Ventilation, etc.

There are no line drain or ventilate. Sewerlinewater small trunk, etc.
are provided. Drain in a water pipe is the tree of the main building.

(47) Pavement.

On Body of this Station are in Pavement allowed
the maintenance affect in county, the active Laboratory pavement, are fairness
and the pavement.

The attendants are one engineer, one fireman, three E-7 stokers, one
night watch, 3 laborers, 1 laborer, three janitors, one messenger, one
patrol, the porter and one messenger. Total 12. The above number does
not include officer nor the general labor of the station.

(48) Lighting.

The principal rooms within are provided, but not in Gas. The alter-
nate rooms are lighted and provided.

(49) Stable.

There are a few stable accommodation in the Marine Barracks for the
[illegible] of [illegible] and not at work.

(50) Storage of Supplies.

Laboratory Supplies are provided on hand in stock accounts and the
is satisfactory. The material-officer in charge and the [illegible] by daily

do not favor purchase of supplies on formal proposals obtained at intervals of three months but state that if purchases of subsistence and hospital supplies in the open market could be authorized a saving of from 20 to 25% could be effected in each year.

APPENDIX A

Marine Hospital at Cleveland, Ohio.

Appropriation for Repairs and Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS.	Estimated Cost.
5.	Diet Kitchen in 3rd story hall.	$ 300.00
18.	New tile floor and base in operating room.	300.00
18.	Hard plaster in lieu of tile wainscot in operating room.	75.00
28.	Enlarging operating room by installing bay in place of two windows as at present.	450.00
27.	Padded Cell ward.	200.00
		$1,325.00

Only urgent repairs for present

APPENDIX B.

Marine Hospital at Cleveland, Ohio.

Appropriation for Mechanical and Electrical Equipment.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report	ITEMS	Estimated Cost.
5.	Gas and water piping, sink etc. for diet kitchen. 3rd story hallway.	$ 200.00
17.	Motor for laundry machinery.	175.00
18.	Surgeons washup sink No. 36-R-2-4.	125.00
18.	Installing shower bath in sterilising room.	500.00
36.	New conduit and wiring system for electric light service.	900.00
		$1,900.00

APPENDIX C.

Marine Hospital at Cleveland, Ohio.

New Construction.

* * * * *

ITEMS HEREUNDER require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
	New hospital building for 100 beds, including hospital equipment, land and improvements to plant.	$500,000.00

APPENDIX D.

Marine Hospital at Cleveland, Ohio.

Administrative Equipment.

* * * * * * *

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report	ITEMS	Estimated Cost.
30.	Office (out-patient)	$ 53.00
2.	Office (hospital)	90.00
22.	Wards.	130.00
18.	Operating room.	220.00
18.	Dressing room	25.00
30.	Laboratory.	109.00
19.	X-Ray room.	25.00
5.	Diet Kitchen.	20.00
12.	Dining room.	14.00
8.	Officers quarters.	69.00
9.	Attendants quarters.	148.00
17.	New mangle for laundry.	450.00
36.	Lighting fixtures for ward rooms.	250.00
		$1,603.00

APPENDIX B.

Burns Hospital at Cleveland, Ohio.

Immunization Equipment.

* * * * * * *

Additional equipment items to immediately arrive.

Number of Rooms	Item	Estimated Cost.
1.	Fitted Instrument.	$ [illegible]
2.	Fitted Dressing.	[illegible]
3.	Table.	[illegible]
4.	Operating room.	[illegible]
5.	Surgical room.	[illegible]
6.	Laboratory.	[illegible]
7.	Large room.	[illegible]
8.	Rest Kitchen.	[illegible]
9.	Dining room.	[illegible]
10.	Toilets sanitary.	[illegible]
11.	Alternate waiters.	[illegible]
12.	Two weights for Dumbbe.	[illegible]
13.	Lighting fixtures for each room.	[illegible]
		$[illegible]

Relative to the disposition of the
U.S.Marine Hospital Reservation,
Cleveland, Ohio. (COPY)

Office of
Medical Officer in Command

TREASURY DEPARTMENT

United States

Public Health Service

Cleveland, Ohio.

M.H.

Cleveland, Ohio, November 24th, 1914.

Senior Surgeon D. A. Carmichael,

U.S. Public Health Service,

Detroit, Michigan.

Sir:

In compliance with your request, I beg to advise you it is my opinion that it would be more advisable to dispose of the Cleveland Reservation by sale, and to use the proceeds to purchase a new site to be used for the construction of a modern hospital building, rather than make any extraordinary repairs to the present structure in an attempt to bring it up to the requirements of a modern hospital.

The Cleveland Reservation on account of its location is entirely too valuable to be continued perpetually as a site for a Marine Hospital, as its location on the lakeshore contiguous to the railroads and in the probable center of future great commercial and railroad activities would make its sale at some future time very profitable to the Service. My suggestion is that the property be held until the question of ownership of the submerged land in front of the reservation is determined by the Courts, which decision may materially add to the extent and value of the Reservation. With the proceeds of this sale, a new site on the west side of the Cuyahoga river could be secured at a moderate cost, and a modern building constructed thereon. There would still remain a very considerable balance which might be used by the Service for other purposes. It would seem desirable therefore to recommend only such repairs and additions to the present equipment as

would maintain the efficiency of the Station until the time seemed appropriate to consummate the sale of the property.

Respectfully,

(Signed) C. W. WILLE

Surgeon and Custodian.


Plan showing approximately the change in shore line U.S. Marine Hospital CLEVELAND, O.
Dock
Pier
Dock
Pier
Dock
U.S. Engineers Office.
LAKE ERIE
LAKE ERIE
Filled in
Filled in
Fill being placed now
August 5th 1914
New Bridge being constructed
U.S. MARINE Hospital.
East 9th Street
Lakeside Hospital Buildings
Wood Block
Lakeside Avenue
Brick paved

Estimated tent capacity
189

· VIEWS · OF · U·S·MARINE · HOSPITAL ·

CLEVELAND, OHIO.

FRONT VIEW. BLDG. No. 1.

PHARMCIST QUARTERS & BLD. No. 1.

REAR VIEW OF HOSPITAL

MAIN BUILDING No. 1.

WARD & LAUNDRY BUILDING

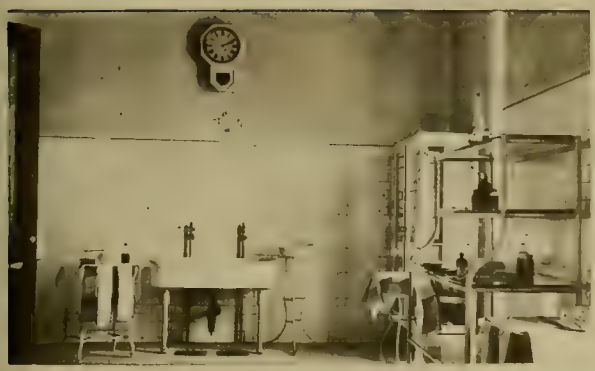
WARD & ATTENDANTS BLDGS.

POWER [illegible] BLDG.

MORGUE & ATTENDANTS

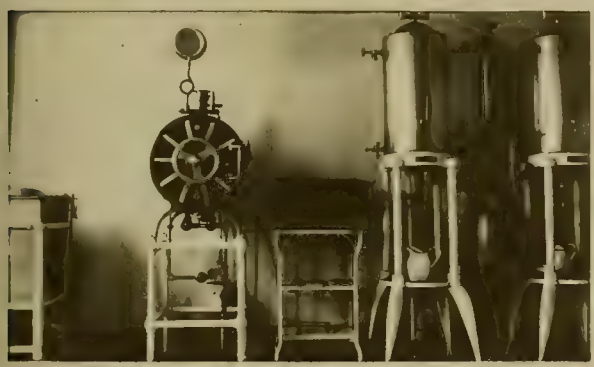
· VIEWS · OF · U·S·MARINE · HOSPITAL ·

CLEVELAND OHIO



· WASHUP · ROOM ·

· SURGICAL · DRESSING · ROOM ·



· STERILIZING · ROOM ·

· SURGICAL · WARD · WHITE ·

· GENERAL · WARD ·

· ENCLOSED · VERANDA · · UNDER · REPAIRS ·

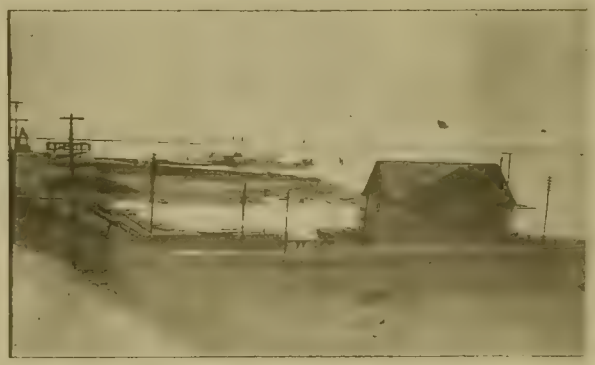
·U·S·MARINE·HOSPITAL·

CLEVELAND · OHIO

·GENERAL·VIEW·FRONT·

·GENERAL·VIEW·SIDE·

·SHOWING·REAR·&·R·R·TRACKS·



·REAR·SHOWING·WATER·FRONT·&·HILL·

·SHOWING·SPUR·TRACK·

·SHORE·LINE·&·YACHT·CLUB·HOUSE·

·GENERAL·FILL·FROM·CLUB·HOUSE·

·BEACH·IN·FRONT·OF·CLUB·HOUSE·

JTC

September 27, 1915.

The Honorable
The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Cleveland, Ohio., with the request that a bill be prepared for presentation to Congress authorizing the sale of the marine hospital reservation at Cleveland, Ohio, the proceeds of the sale to be used for the purchase of a more suitable site and the erection of a new marine hospital thereon; money received from the sale not needed for this purpose to be utilized in rehabilitating other marine hospitals or building new hospitals at stations where the present buildings are old and out of date.

I respectfully suggest that all but the most urgent

September 27, 1921.

The Secretary

The Secretary of the Treasury.

Sir:

The Treasury reference to your letter of August 23, 1921, setting up 3 reasons in the negative submitted by the Attorney General to make an investigation of all matters pertaining to the transportation of oil, crude and refined, and gasoline statistics [Report and Hearings, 67-1, and Proceedings, Senate], I hope the Senator is aware that I approved of the recommendations of Mr. Davis relative requiring the Radio Corporation of America, which, with the exception that a bill is pending for transmitting to Congress the statistics of the Radio Corporation, the payment of the bill is to be made for the purchase of a large building for use of the Department of Justice and a new junior department of Justice, and the Senate Judiciary Committee has asked for this report to be published in pamphlet form. Other matters pertaining to appointments are possible at anytime there are present vacancies or appointees are due out of date.

I respectfully suggest that all of the best interest

The Honorable
The Secretary of the Treasury
September 27, 1915.

No. 2.

repairs recommended in the report be postponed until it is ascertained what action Congress intends to take regarding the sale of the property.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

DETROIT, MICHIGAN.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent
of Construction, U.S. P.B.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

I

Report of inspection made November, 1914, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The marine hospital at Detroit, Michigan, is located on a reservation of about four acres in extent, bounded on the north by Jefferson Street, on the east by Mount Elliot Street, on the south by Wight Street, and on the west by adjoining property. It has a width of 250 feet and a depth of 750 feet, is quadrilateral in form and slopes gently in the rear to the Wight Street boundary. The grounds, roads and walks are well cared for, and a number of fine trees and shrubs with numerous flower beds present a pleasing and attractive appearance. The main hospital building is in the form of an H, consists of a basement and three stories; is constructed of red brick and is a plain and substantial structure. It has ornamental iron porches on three sides, one for each story, and at rear and east sides are the laundry, stable, fuel, boiler and engine rooms, isolation buildings and a small green house, used in connection with the cultivation of flowers for the grounds. The surgeons' house is located in the front part of the reservation to the north and west of the main building. The reservation is distant about two miles from the city hall and custom house and about one hundred yards from the north shore of the Detroit River.

(2) History.

The hospital reservation was ceded to the United States by the legislature of the State of Michigan in the year 1853.

The construction of the hospital was begun in 1854 and was completed near the end of the year 1857. From 1857 until 1879 the Collector of Customs for Detroit was acting custodian of the building and grounds and on his recommendation local physicians were appointed to take charge of the hospital. In 1879 this practice was discontinued and in November of that year a regular officer of the Service was detailed for duty and placed in charge of Service affairs at this post. Regular officers have been in charge of the station since that time, acting as custodian of the buildings and grounds.

(3) Need for a Marine Hospital.

The amount of relief furnished at this station has steadily increased since 1879 and at the present time the Detroit Marine Hospital is considered one of the most important on the great lakes.

As the Government has maintained a hospital station here since 1857 for the relief of lake seamen, such a structure is a necessity and the present plant is sufficient for present needs and if necessity arises therefor can be enlarged to meet all possible demands.

I

Report of Inspection made December, 1921, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The marine hospital of Detroit, Michigan, is located on a peninsula of about five acres in extent, bounded on the south by Jefferson Street, on the east by Mount Elliott Street, on the north by Gratiot Street, and on the west by adjoining property. It has a history of less than a half a century, is geographically in fine and unique quality in the area in the most crowded manufacturing district. The grounds, walks and walls are well maintained, and a number of fine trees and shrubs with abundant flower beds present a pleasing and attractive appearance. The main hospital building is in the form of an H, consisting of a basement and three stories; by measurement it has a floor and is a plain and substantial structure. In the accompanying plan, the new wards, and as such and other alterations are the basement, which, in fact, is entirely unsuitable, lighting facilities are small (green house, used to accommodate all the activities of disease for the patients). The outpatient house is located in the rear part of the premises to the south and west of the main building. The accommodations are of a very old and obsolete type. Thus the entire plant is a very small one, and the hospital plant is the only one of the Detroit River.

(2) Climate.

The climatic conditions are similar to the United States by the latitude of the lake of Michigan in the year 1920.

The construction of the hospital was begun in 1907 and completed early the end of the year 1908. From 1907 until 1919 the collector of customs for Detroit was acting superintendent of the building and grounds and of the responsibility. Local physicians were appointed to take charge of the hospital. In 1919 this practice was discontinued and in accordance of the [illegible] of the Treasury Department, the City and Village of Detroit have been in charge of the hospital on this basis. Superior authority has been in charge of the hospital since that time, acting in behalf of the building and grounds.

(3) Land for a Marine Hospital.

The matter of medical treatment of this patients has changed since 1907 and at the present time the Detroit Marine Hospital is considered one of the most important of the local hospitals.

As this hospital was established a hospital should have since 1907 for the relief of lake seamen, such a structure is a necessity and the general plant is sufficient for present needs. It is not a marine hospital [illegible] for one by whatever to meet all possible needs.

(4) Adequacy of Plant.

The present hospital is adequate for the probable needs of the station for some time to come except that an attendants' quarters building is needed and certain minor improvements are required to properly equip the plant. These are described under section III.

(5) Acquisition or Disposal of Land.

The present reservation is of sufficient extent to provide for all probable contingencies of growth. Although not ideally located for hospital purposes on account of neighboring factories, it is convenient to the waterfront and the investment does not warrant consideration of a new site. None of the reservation should be disposed of.

(6) Future Development or Disposal of Plant.

The present plant is adequate for the needs of the station for some time to come and should not be disposed of.

Increased capacity can be provided when required by the erection of additional buildings on the present reservation.

II

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings. (for details see appendix A)
Total estimated cost of work recommended, $ 2250.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended, 2280.00

(3) Legislative Appropriation for New Construction (for details see appendix C)
Total estimated cost of work recommended, 12000.00

(4) Appropriations for Administrative Equipment (for details see appendix D)
Total estimated cost of items recommended, 3992.00

TOTAL $20522.00

(5) Personnel.

Adequate.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, Main Hospital, three-story and basement, stone masonry foundation, brick superstructure with limestone trimmings, all exterior surfaces painted, tin roof, fireproof except roof, plastered walls and ceilings throughout painted, pine base and trim painted. Halls, corridors, toilet rooms, operating room, surgical dressing room and reception room

have terrazzo floors and marble base, basement rooms have cement floors, all other floors are 3¼ D & M pine. Main corridor, first floor has marble wainscot and cap 3'-3" high, steam heat, gas and electric lights. Floor area 16,581 square feet. The building has three verandas three stories high, doors opening on front verandas have wood panels. The four upper panels of each door should be replaced with one glass panel each, to give more light in halls in which they are located.

Building No. 2, Bath House, attached to building No. 1, three story and basement, stone masonry foundation, brick superstructure, tin roof, fireproof except roof, all floors terrazzo with cove base, marble wainscot in toilet rooms, and pharmacist kitchen, cement floor in basement, 3¼ D & M pine elsewhere, plastered walls and ceilings painted, pine base and trim painted, steam heat, gas and electric light. Floor area included in building No. 1.

Building No. 3, Boiler House. A one story building without basement, contains 2 RT heating boilers with usual boiler accessories and a 15 HP vertical engine, has brick floor in boiler room, wood floor in engine room, no interior finish, boiler heat, electric light. Floor area 800 square feet.

Building No. 4, two story brick, no basement, slate roof, first floor cement, second floor 3¼ D & M pine, plastered walls and ceilings, painted, pine base and trim, painted, steam heat, electric and gas light. Floor area 1,434 square feet.

Building No. 5, Surgeons' Residence. A two story and basement, brick structure. Stone to first floor, flat tin roof, generally in fair condition, will be in good condition when authorized repairs have been completed. The building contains eight rooms above the ground, with servants' room, laundry and toilet in basement, steam heat, gas and electric light. Floor area 9,700 square feet.

Building No. 6, Isolation Building, One story brick, no basement, tin roof, terrazzo floors in hall and toilet, wood floors elsewhere, plastered walls and ceilings painted, pine base and trim painted, steam heat, gas and electric lights. Floor area 660 square feet.

Buildings Nos. 7 and 8, Barn and Carriage House, brick, 1½ story, no basement, corrugated iron roof, the carriage house section is of wood frame covered with sheet metal, carpenter shop in left overhead. Cement floor on main ground level, wood floors in loft, no interior finish or paint, electric light, no heat. Floor area 640 square feet.

Building No. 9, Green House, one story, wood frame, on brick foundation, glass roof and sides, no interior finish, dirt floor, no heat, no light. Floor area 600 square feet.

Building No. 10, Necropsy Building, a one story, wood framed building, sides covered with sheet metal corrugated iron roof. Cement floor, D & M walls and ceilings, which needs cleaning and oiling. Interior trim needs paintin Plumbing drain from table needs repairs to waste line valve, steam heat, electric light. Floor area 205 square feet.

Building No. 11. One story brick coal storage building, tin roof, no interior finish, plank floor, no heat, no light. Floor area 168 square feet.

(2) Offices.

Surgeons' Office is located on the first floor to the right of main entrance, is a good sized room, lighted by windows on the north side and is fairly furnished. Three office chairs, a new carpet and a six sectional book-case are needed to complete its equipment.

Pharmacists' Office.

Located on the first floor of the building opposite the surgeons' office, is a room of about the same dimensions as the former and is in need of a new rug, a new typewriting machine and chair and a letter file.

(3) Visitors' Reception Room.

A small room off the main hall, adjoining the dispensary is used for this purpose. Is fairly furnished, but a table is needed for this room.

A vacuum cleaner is needed for use in the above named office and rooms.

(4) Examining Room.

No special room for this purpose. Patients, when necessary, are examined in the waiting room, offices or in the surgical dressing room on the second floor. With the present assignment of rooms there is no space available for such a room.

(5) Kitchen and Diet Kitchens.

The kitchen is located in the basement in the north east corner, is a good sized room, with substantial cement floor, fairly furnished, but has no steam or warming table, and only some kitchen utensils are needed to bring the equipment up to a good working standard. A dish washer would be desirable.

There are no diet kitchens in this hospital and no provision can be made for such rooms until some of the attendants now quartered in the building are provided elsewhere.

(6) Pantry and Food Storage.

The kitchen has no regular pantry, but cupboards placed along the walls of the room answer this purpose.

(7) Storage Rooms.

Adjoining the kitchen is a large room which is used as a kitchen store room. It is convenient and well suited for the purpose.

Located in the rest of the basement are store rooms for general stores, medical stores, linen, stationery and glassware, and for condemned property. These rooms are fitted with handsome wall cases and are sufficient for all needs.

(8) Quarters for Officers.

Surgeons' Quarters.

Located in a separate building placed to the northwest of the main building, constructed of brick with stone basement. It is two stories in height and contain four bedrooms, one servants' room, bath room, front and rear stairways, and on the first floor, parlor, reception room, dining room, bedroom and kitchen. It also has a number of closets, a front and rear porch, and is heated by a hot water heating apparatus, located in the basement. It is comfortably furnished, but two more carpets are needed for bedrooms and two leather arm chairs require repairs.

(3) Kitchen.

Surprisingly little is learned on the Court floor so we shall at least welcome, in a good sized room, lighted on entering on the south side, in daily involved. Here office equipt, a new range and a sink cupboard boxes are needed to complete its equipment.

Cloakroom (girls).

Locate, as we just said, also on the building equipts the cloakroom office, in a room of some the same dimensions as the cloak and as in head of a new row, a new typewriting machine and chair and a letter file.

(3) Kitchen Equipment Space.

A small room of the same size, adjoining the kitchen, is used for this purpose. It ideally lacking, and a table is needed for this room.

A vacuum cleaner is needed for use in the boys' hall and rooms.

(4) Dressing Room.

To complete the this process. Initially, when necessary, one cupboard in the waiting room, either as in the medical inspection room or the room with the present equipment or room which is to be made available for only a room.

(5) Kitchen and Dish Scullery.

The kitchen is located in the Cottage. In the body and accessory, is a good sized room, with substantial wooden floor, fairly functional, but not so pleasant or working table, and only some cupboards are necessary to bring the equipment up to a good working standard. A third washer would be invaluable.

There are no dish cleaners in this hospital and no provision can be made for such from funds until some of the allowances now provided in the building and provisal elements.

(6) Feeding and Food Storage.

The kitchen has to be the pantry, cut-cupboards (based among the wall of the room) answer this purpose.

(7) Kitchen Lights.

Adjoining the kitchen is a large room which is used as a training class-room. It is equipped and well suited for the purpose.

Needed in the room of this Department are chairs, rooms for general classes, medical classes, lions, chiropody and physiotherapy, and for academic purposes. These rooms are fitted with tables and chairs and are sufficient for all needs.

(8) Provision for Children.

Nursery Accommodation.

Included in a separate building placed in the southwest of the hospital, constructed of brick with slate roof. It is the nearest to ideal and good that hospitals, one nurseries' room, half room, first aid room, toilets, and the office, pantry, reception room, dining room, bedrooms and kitchen. It also has a number of closets, a front and rear porch, and is heated by a gas heating installation. Located in the Nursery. It is generally furnished, but two more cupboards are needed for the kitchen and for another one which provides storage.

21

Internes' Quarters.

Consist of two small rooms on the first story on the west side of building No. 1 and adjoining the surgeons' office. One of these rooms is used as a sitting room and the other as a bedroom. A small toilet and bath room between these rooms and the surgeons' office is used by the Internes and the Surgeon in charge. No furniture is needed for the rooms, except a hat rack.

Pharmacists' Quarters.

These are placed on the first floor on the west side in the rear of the Surgeon's office and consist of a sitting room, a dining room, two bedrooms, a kitchen and a small room and pantry. These quarters need carpet rugs, repairs to chandelier, a drop light and some table dishes.

(9) Quarters for Attendants.

Four attendants are lodged in the main building in two small rooms on the east and west sides, the remaining eleven are quartered in the upper story of the laundry building and in the isolation building.

These quarters are comfortable and sufficiently furnished. Two of the attendants lodged in the main building should be accommodated elsewhere and the room occupied by them utilized for needed hospital purposes, such as padded room, diet kitchen, etc. A new building should be provided for all attendants and the isolation building returned to its intended uses.

(10) Patients' Dining Room.

A small room on the right of the main corridor on the third floor is used for this purpose. It requires a small locker for towels, to be placed in the hall adjoining. Some iron stone china, knives, forks, and spoons are needed. There is a dumb waiter opening into this room which runs to the kitchen in the basement. It is of old type worked by hand and not satisfactory. A new electrically operated one is needed.

(11) Officers' and Internes' Dining Room.

Located on second floor of building opposite the surgical dressing room, has dumb waiter service and is sufficient in needs except some table linen and dishes.

(12) Attendants' Dining Room.

Located in northeast corner of first floor. Is ample in size and sufficiently furnished except for dishes. It has dumb waiter service and a stairway leading to the kitchen in the basement.

(13) Recreation and Smoking Rooms.

There are two smoking rooms, at the rear of the wards on the west side of the second and third floors and formed by utilizing a portion of the veranda at the rear of the building. They are sufficiently furnished and are suitable for the purpose.

(14) Disinfecting Facilities.

A Kinyoun Francis steam disinfector is installed in a room, provided for that purpose in the basement, which has a formalin and ammonia attachment, and is ample for probable needs. A dressing sterilizer is located in the operating room and an instrument sterilizer in the surgical dressing room, the latter being heated by gas and in fair condition. Steam heated. Utensil sterilizers should be provided where required.

(15) Incinerators.

There is no incinerator on the station. A water jacketed incinerator should be installed.

(16) Disposal of Soiled Linen.

Soiled linen is tied in bundles formed by sheets and removed from the wards and rooms by hand and lowered from the porches near the wards to the ground and then carried to the laundry. Galvanized iron boxes are placed on the porches near the wards to receive the soiled linen.

Infected and suspicious linen is soaked in carbolic solution or bichloride before removal from the wards.

Infected mattresses, pillows and clothing are treated in the steam sterilizer in the basement.

(17) Laundry Facilities.

A fairly equipped laundry is installed on the first floor of building No. 4 and contains two washers, one centrifugal dryer, one 84" mangle, one stationary earthenware tub and a ten rack steam dryer. While the space allowed is somewhat inadequate, the apparatus is satisfactory for present needs. The machinery manufactured by Nelson and Kreuter is driven by a vertical slide valve engine of ample power. Electric heated irons should be increased from one to at least three and the wiring extended to both rooms where ironing is done.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room.

Is a fair sized room located on the west side of the second floor, in the rear of and separated by a hallway from the surgical dressing room. It has a good terrazzo floor and tile wainscot, with cove base. Is well lighted but not very well equipped. It needs a larger sink for hot and cold water of modern type, with knee or pedal attachments and some new instruments.

Surgical dressing room and sterilizing room. Located on the west side of the corridor of the second floor, opposite Internes' dining room. It is a good room with terrazzo floor and is well suited for the purpose, but needs a new sink to replace an old and small one now in the room, and rack and bottle for disinfecting solutions. White enamel basins and pus basins are needed.

(19) X-Ray Facilities.

The X-Ray room is located on the second floor, east wing, next to the Revenue Officers' ward. It has a Grosse-Plaine apparatus which is old and out of order and does not give satisfactory work. It should be replaced by a new apparatus, made to operate with the alternating current. A new X-Ray tube, an intensifying screen, some developing trays and a table are needed. Room should be repaired and made light proof and painted black.

No dark room. Developing done in closet at night and in X-Ray room with darkened windows. No space for one until attendants in building are moved elsewhere.

(20) Laboratory.

Located in the northeast corner of the third floor, is suitable for ordinary clinical purposes, but a new microscope, a dark field illuminator, a thermostat, some funnels and enameled dishes are needed. There is a Leitz microscope in the city office, not used, which could be transferred to the

(d) Finishing.

There is no information on the finishing. A motor powered instrument would be installed.

(e) Removal of Pulled Glass.

Pulled glass is laid in moulds formed by plates and removal from the tanks and rolls by hand and lowered from the process deck the rolls to the annealing and then outside to the country. Substituted from lower rollers to the annealing oven is made to receive the pulled glass.

Rollers and annealing oven is heated by muffle machine or electricity before removal from the mould.

Selected materials, pillars and shrinks are removed by the chosen pattern in the lehrs.

(f) Operator Facilities.

A fairly modern society is included on the first floor of building. A and contains two machines, one punching press, and the machine, one mechanical operations has and a hot work press press. While the press allows machine's functions. The operator is satisfactory for present results. The factory manufacturer by Ludwig was forced to drive by a motorist drive which allows of single speed. Electric motor should be increased from one to lehrs times and the system attached to hot work press driving is lots.

(g) Operation and Material Handling and Facilities.

Operation Flow.

In a flat glass, road lorries for the roof work at the second floor. In the of and supported by a bolster from the digging handling rods. It has a of towards floor and the machine, and two lines. It well lighted and very well equipped. It works a larger and for hot and water at more type, with one or pull chemicals and room for behaviour.

Material transfer from and storaging room. Lastly in the roof side is carried on the second floor, together towards' finishing room. It is a and from pit between floor and is well suited the for purposes, but there also is trolleys on all and small and on in the every, and short and lorries distributing machines. Pulls manual hoists and pre-heater are needed.

(h) Flow Analysis.

The lehr room is located on the second floor, work wing, next to the venue factory room. It has a Lehr-Flow equipment which is for and over and also and the factory room. It should be replaced by a two machine, note is quality with the electrical method. A new Lehr-Flow equipment, factory room, more developing space and a fitter for needs. Some will be replaced and make flow proof and pulled glass.

In flow room. Developing room is placed at right and in front room flow/plates. No space for and small extensions in developing room and warehouse.

(i) Operations.

Located in the warehouse corner of the total floor, is suitable for factory clerical employees, and is not dangerous. A lower floor floorboard, some inserts and cracked floors are needed. There is a lack of storage in the city office, not used, which could be lower space in the

hospital laboratory. Wassimmns sent to Hygienic Laboratory, Washington, D. C. 2

The gas supply for this room is defective and larger pipes are needed.

(21) Dispensary.
This room is located on the first floor in the rear of the visitors' reception room. It is badly in need of shelf dispensing bottles, but otherwise is sufficiently furnished for the needs of the station.

(22) Wards for Seamen.
Second floor. There are two wards on this floor of nine normal bed capacity each. The officers' room on this floor is used for special cases when not otherwise required. Capacity one bed

Third floor. There are two wards on this floor of nine normal bed capacity each and one ward with a capacity of four beds.

(23) Quiet Wards.
There are no rooms specifically set aside for this purpose. The ward assigned for officers of Revenue Cutter Service on the second floor can be used for this purpose if necessary. There is no other space available.

(24) Wards for Revenue Cutter Officers.
There is a room on the second floor provided for this purpose, capacity one to two beds. The demand for such facilities is slight and the room is used for general ward purposes.

(25) Toilet Facilities.
The toilet accommodations, consisting of shower and tub baths, closets, urinals and slop sinks are adequate in all respects, except that in the operating room and surgical dressing room and laboratory where new modern sinks suitable for their needs should be installed.

(26) Portable Tubs.
There is but one old zinc lined portable tub without rack. Two modern portable tubs are required with racks as quite a number of typhoid fever cases are treated in hospital here each year.

(27) Padded Cells.
There is no room for the special treatment of alcoholics or insane patients and at present an insane seaman who will not bear transportation on account of valvular heart affection is confined in the Revenue Cutter Officers room. Such a room should be provided by moving an attendant from the small room in the northwest corner of the third floor of the building.

(28) Necropsy Facilities.
Necropsy facilities of ample size are provided in a small one story frame building having cement floor with drain. A suitable autopsy table is installed, with sewer drainage, the valve of which needs repairs. A sink and other accessories are present and the equipment is adequate for all probable needs.

(29) Isolation Facilities.
The building originally designed for isolation purposes is now used as attendants'quarters. Suspected cases are accommodated in the room designated as an officers' ward, but such cases are infrequent.

The majority of contagious cases are cared for in city hospitals. The building should be returned to its original use and a new building erected to house all attendants.

(30) Out-Patient Office.

Located in the Federal building, room No. 400. Consists of a large room used as an office dispensary, a waiting room, a surgical dressing room with sink table, surgical and dressing cases, and a small dark room, for examination of eye, ear and throat cases.

(31) Floor Space.

Total net floor space, main building:

Basement	3660
1st floor	3104
2nd floor	3049
3rd floor	2847
	12660
Total hall space	3921
Total	16581

Total net floor space for hospital uses	63%
" " " " " living quarters (except hall space)	13%
" " " " " hall space (including quarters)	24%
	100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 41 beds, maximum 46. On a normal basis each patient has 70 square feet of floor area and 900 cubic feet of air space. At the present time there are 11 beds in one ward giving less than 60 square feet of floor space per patient. The normal capacity of this ward is estimated at nine beds.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal year 1909, 1913, 1914 and also for the period from July 1 to October 31 for the calendar years 1913 and 1914.

	1909	1913	1914	Jul.1 to Oct.31 1913	Jul.1 to Oct.31 1914
No. days hospital relief furnished	8012	7719	10835	3122	3995
Daily average, hospital patients	22.0	21.0	29.8		

(Continued)				Jul.1 to Oct.31	
	1909	1913	1914	1913	1914
Total daily cost per hospital patient		$3.06	$2.06		
Number of hospital patients	543	288	454		
Number of outside patients	1097	934	1197		
Number of times treated	3458	4366	2987		

On November 25 there were 27 patients of whom nine were chronics. Tubercular patients one. The maximum daily number in hospital for last 10 years is estimated at 45 to 50, exact date not being available. The number of hospital days relief furnished during the first 4 months of the present fiscal year is 28% greater that for the same period in the preceding year. The relief furnished for 1914 is 40% greater than for 1913, the latter year being about the same as 1909. In the fiscal year 1906, hospital relief furnished was 12024 days.

(34) Ambulance Service.

Service furnished under contract for $2.50 to $5.00 per round trip. Service is excellent and facilities adequate.

(35) Heating, Power Plant and Ventilation.

A central heating and power plant is located in building No. 3, and supplies power for laundry machinery, and low pressure direct steam radiation to all buildings requiring heat, except building No. 5, which has a local low pressure, direct radiation steam heating plant.

The plant consists of two return tubular boilers in standard brick settings. One vertical slide valve engine for laundry power and one single cylinder single acting boiler feed pump.

Boilers are operated at 40 pounds pressure for power, radiation is reduced to 3 pounds through reducing valve.

The plant is adequate and in good repair except that the boiler feed pump is worn out and a new one is needed.

Ventilation is provided in part by small registers in the walls connected to chimneys in the building, and is satisfactory under present conditions.

(36) Illumination.

The main building is illuminated by both gas and electricity, through combination fixtures of ancient design and inadequate as to outlets. The electrical service is very constant and gas is resorted to very little due to failure in this service. The laundry building is lighted by gas only. The isolation building by both. Drop cords and side wall switches are installed in the isolation building and the wiring is concealed. In the main building the wires are run in exposed wood mouldings, andis dangerous

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[illegible]

[illegible]

by reason of short circuiting, which occurs frequently. Wiring should be placed in metal conduits and new modern fixtures suitable for the needs of each room should be installed. Wiring should be extended in building No. 4 to include all rooms, and two more outlets for electric irons.

(37) Decoration.

The decoration throughout the buildings is now being renovated and the colors selected will be satisfactory, the specifications however do not provide for painting the patients' dining room, the pharmacist's dining room, nor the X-Ray room, which should receive attention.

(38) Telephone and Call System.

There is one direct connected city telephone, Bell system. There is an old type intercommunicating telephone system, 16 stations, 14 in use, in poor condition, connecting various parts of main and out buildings. There is no bedside call system and none is needed.under present conditions.

A modern intercommunicating telephone system should be installed.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant and none is needed. Ice is supplied to refrigerators installed in the basement kitchen store room. This is ample in size but needs repairs and replacements to hardward. Artificial ice of good quality is supplied under contract which is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from 8" city main in Mt. Elliott Avenue. The city supply is obtained from the lake and is of good quality. The city has a settling basin, but no filter plant, although the water is chemically treated when needed. There is no filter plant at the hospital. Water pressure is 35 to 40 pounds, supply main 4 inch. There are fire hose reels within the main building, one on each floor, but none in the basement, or in the out buildings. Each reel has 75 feet of 1½" hose and nozzle, reels are old style. There are no fire hydrants outside on the grounds but there are five city fire hydrants and three city hydrants piped for fire tub connections at the water front, on the streets bordering the reservation. City fire engine house is about 4 blocks away. There are 12 chemical fire extinguishers, 3-gallon underwriter type, fairly well distributed. Three additional fire extinguishers are needed for laundry, isolation building and engine room.

One hose reel and 75 feet 1½" hose and nozzle is needed in basement of main building and one in isolation building, new piping to the latter building will be required. With exceptions noted facilities are adequate.

(41) Fire Alarm System.

There is a bell on the rear porch which is struck by hand. Drills are held weekly. There is a city fire box in front of reservation, at corner of Jefferson Avenue, and Mr. Elliott Avenue. Facilities are adequate.

(42) Sewer and Other Drainage.

Sewage and storm water are taken care of in a combined system, discharging through 8" terra cotta pipe direct to river. This sewer passes through Light House reservation and is used by the Government only.

(43) Streets, Roads, Walks, Fences and Grounds.

Roads.

There is a macadam driveway from Jefferson Street with oval in front of main buildings. Roads lead to various buildings and are in good condition and adequate.

Walks.

There is a cement sidewalk on Wight Street in good condition. The flag stone walk on Jefferson Avenue is below the level of the parking, its regrading and resetting has already been authorized. There is no sidewalk on Mt. Elliott Avenue. There are adequate cement and flag walks within the grounds. No improvements are needed except the minor repairs already authorized.

Fences.

The entire reservation is inclosed by an iron picket fence, with gates on Jefferson Avenue and Mt. Elliott Avenue. It is in good condition and adequate.

The grounds are well kept and the appearance excellent. A portion of the grounds is below the general street level, especially along Mt. Elliott Avenue. Although a regrading of the ground of the front lawn and to the east along Mt. Elliott Avenue will be desirable in the future, it is not a matter of immediate need and should be postponed until Mt. Elliott Avenue is paved and the street grade definitely established.

(44) Wharves, Etc.

None. There is no water front.

(45) Livestock, Etc.

There is no livestock or vehicles, except an old ambulance which should be disposed of. There is a miscellaneous equipment of small tools and a wagon scale. Facilities are adequate.

(46) Personnel.

There is on duty at this station, one Senior Surgeon, one Surgeon assigned to the out patient office in the Federal building, one Acting Assistant Surgeon, engaged in immigration inspection work exclusively, two internes and one pharmacist.

The attendants are, one engineer, one laundress, one matron (immigration work) one cook, one clerk, two nurses, one fireman, one night nurse, one assistant cook, three hallmen and two yard men, 15 in all.

The above force is considered sufficient for the administration of the station.

(47) Records.

The records of the station are properly kept, including the clinical records.

(48) Books.

There are quite a number of modern medical books in the station library and the usual assortment of old and out of date medical works.

(49) Purchase of Supplies.

Subsistence and other supplies are furnished on yearly contract after

(4) Kitchen, Dining, Sitting, Cellar and Garage.

Meals.

There is a modern kitchen; two dining-rooms (each will need to have a fire); a sitting-room. Large food is before building and are to be used weekly and weekends.

Water.

There is a present allowance of 100gm (about 3) and sufficient water mile in difference across is below the level of the garden, the reservoir and practically the highest zone available. There is no alternate on it. Water is a difficulty. There are electric cement and flow mains within the grounds. The improvements are needed except the above problem already mentioned.

Sewage.

All sewage necessitate is treatment by an inner septic tank, with gulley and chlorine cement and it. Sewage tower. It is at least expensive and adequate.

The grounds are very dry and has expensive upkeep. A portion of the grounds is below the general street level, necessitating along the drives. Although a considerable of the ground of the front lawn and is the drive along to. Sitting rooms will be landmark in the drives, it is not a matter of considerable work can easily be performed which the hilary demand is paved but the street rents artificial equipment.

(4) Garage, etc.

None. There is no entry front.

(5) Living, etc.

There is no livestock or poultry, except an old mahogany which should be liquidated at. There is a detached garage building of small floor and a garage and. Installation are adequate.

(6) Insurance.

There is no duty of this nature, the house insurance, the insurance maintained by the any yields office in the normal fulfillment, the action insurance tenure, amount to insurance inspection work exclusively. Insurance and one insurance.

The attendants are, the valuer, the housekeeper, one servant (housemaid) and one gardener, the chauf, the groom, the steward, the chef, the butler, the valet, the footman, the valet, the footman and two grad men. It is all.

The above items is considered sufficient for the administration of the estate.

(7) Income.

The income of the estate are generally high. Including the stables, income.

(8) Debts.

There are only a number of minor medical bills in the ordinary course of the usual expenditure of the but not of some unusual work.

(9) Income of Dependents.

Annuitants and other employees are treated as usually dependent upon

advertisement and accepted proposal.

The medical officer in charge and the pharmacist consider that no advantage would result from purchase by proposals obtained and accepted at three month intervals, but purchase in open market might have some advantage for special articles that fluctuate in value from time to time.

APPENDIX A.

Marine Hospital at Detroit, Mich.

Appropriation for Repairs & Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	Items.	Estimated Cost.
10	Framing present hand hoist dumb waiter shaft to receive electrically operated dumb waiter	$ 150.00
19-37	Repairs to trim and plaster, make rooms light proof	50.00
20	Larger gas main to laboratory	25.00
27	Fitting up room as padded cell	150.00
37	Painting patients' dining room and X-Ray room	75.00
38	Intercommunicating telephone system	1500.00
40	Fire extinguisher hose reels and piping	300.00
		$2250.00

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

APPENDIX B.

Marine Hospital at Detroit, Mich.

Appropriation for Mechanical & Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
10	Electric dumb waiter machinery	$ 400.00
18	Surgeons' sink outfit No. 36 R-2L	150.00
18	" " " " 42	100.00
25	Sink outfit No. 40B in laboratory	30.00
35	Boiler feed pump - 4½ X 2-3/4 X 4	100.00
36	New metal conduit and wiring for buildings Nos.1,2 & 4.	1500.00
		$2280.00

APPENDIX C.

Marine Hospital at Detroit, Mich.

New Construction.

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of Report.	ITEMS	Estimated Cost.
9	New building for attendants' quarters	$12,000.00

APPENDIX D.

Marine Hospital at Detroit, Mich.

Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of Report.	ITEMS	Estimated Cost.
30	Office (outpatient)	$ 150.00
2	Offices (hospital)	305.00
22	Wards	985.00
18	Operating and Surgical dressing room	202.00
21	Dispensary	90.00
20	Laboratory	160.00
19	X-Ray room	67.00
5	Kitchen	65.00
10	Dining room	115.00
17	Laundry	100.00
8	Officers' quarters	430.00
9	Attendants' quarters	173.00
15	Water jacketed incinerator	150.00
36	New lighting fixtures for building No. 1	1000.00
	TOTAL	$3992.00

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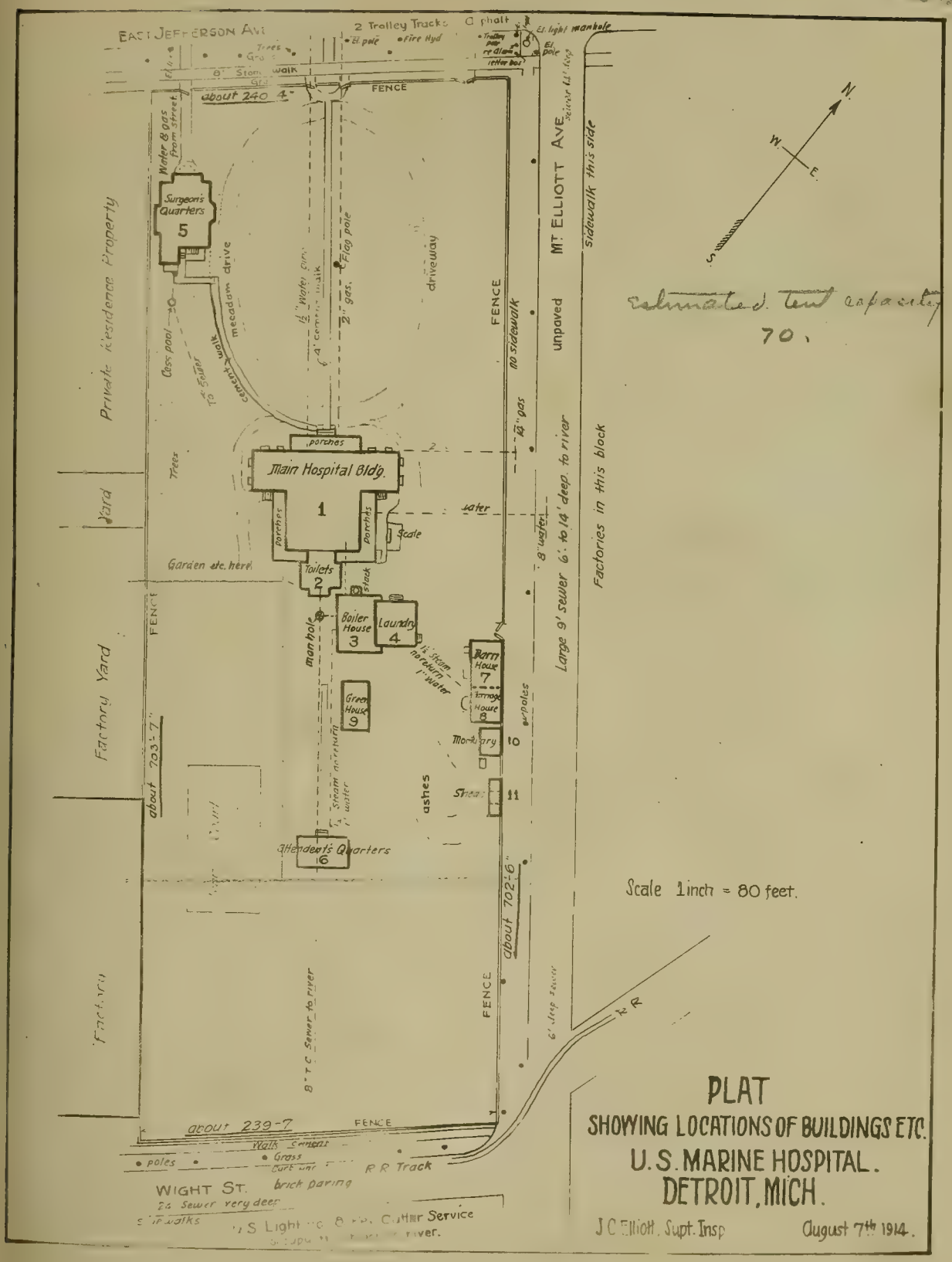

PLAT
SHOWING LOCATIONS OF BUILDINGS ETC.
U.S. MARINE HOSPITAL.
DETROIT, MICH.

J. C. Elliott, Supt. Insp. August 7th 1914.

· VIEWS · OF ·
· U · S · MARINE · HOSPITAL ·

· DETROIT · MICH ·

· SURGEONS' · RESIDENCE ·

· SURGEONS' · RESIDENCE ·

· HOSPITAL · BUILDING · FRONT ·

· HOSPITAL · BUILDING · SIDE ·

· HOSPITAL · BUILDING · SIDE ·

· HOSPITAL · BUILDING · REAR ·

· HOSPITAL · BUILDING · FRONT ·

· HOSPITAL · POWER · PLANT · & · LAUNDRY ·

· VIEWS · OF ·
· U · S · MARINE · HOSPITAL ·

· DETROIT · MICH ·

· STERILIZER · IN · SURGICAL · DRESSING · R'M

· OPERATING · ROOM ·

· LABORATORY ·

· SMOKING · ROOM ·

· WARD · ROOM · WHITE ·

· WARD · ROOM · WHITE ·

· WARD · ROOM · WHITE ·

· WARD · ROOM · MIXED ·

U·S·MARINE·HOSPITAL·

·DETROIT·MICH·

CARPENTER SHOP & MORGUE

LAUNDRY·STABLES·& INSOLATION

ISOLATION HOSPITAL & AREA

SHOWING REAR OF BUILDINGS

SHOWING ALLEY & BUILDINGS

INSOLATION HOSPITAL

STABLE & CARRIER WAGON

KITCHEN

JTC

September 24, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Detroit, Michigan.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

EVANSVILLE, INDIANA.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

M. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

U. S. MARINE HOSPITAL, EVANSVILLE, IND.

Report of Inspection made December, 1914, with recommendations as to policy to be pursued.

I
GENERAL CONSIDERATIONS.

v * * * * * * * * * *

(1) Location.

The hospital reservation is located in the western part of the city of Evansville, near the city line, on an elevation which commands a view of part of the city, the Ohio River and Kentucky in the distance. It is bounded on the north by adjoining property and Franklin Street, on the south by the property of the Orphans' Home, on the east by adjoining property, Illinois Street and old Marine Avenue, and on the west by Barker Avenue.

The reservation is ten acres in extent, is high and well drained; has good walks and roads and substantial retaining walls on the south and north sides. There is a brick wall on the east boundary, picket fences on the north and south sides, and an iron fence on the west boundary. The grounds are well kept and have a number of fine old trees planted therein.

The buildings are compised of a pavilion group, consistint of an Executive building, kitchen and laundry building, two one-story wards, a stable and necropsy building, a filter and tank house, a paint shed and a Surgeon's house of two stories and a basement.

The hospital group is located towards the eastern front, the stable at the southwestern and the Surgeon's house at the southeastern part of the reservation.

(2) History.

In 1853 a two acre site was purchased on the bank of the Ohio River, near the southwest corner of Wabash Avenue, and ground wasbroken in the fall of 1853. The building was completed in October 1856. It was a substantial three-story brick building with stone trimmings and a basement, and cost the Government $73,078.56, and could accommodate 110 patients. It was opened for the reception of patients on January 1st, 1857.

In 1862 this hospital was converted into a general military hospital. In 1867 the building and grounds were sold to a Mr. Carpenter for the sum of $10,507.11. He sold it about two years later to the Catholic Sisters who reopened it under the name of St. Mary's Hospital and took the marine patients under contract. On July 1, 1882 the patients were transferred from St. Mary's to the Evansville City Hospital where they remained until the new Marine Hospital was completed in 1892. The old building was demolished during the past year.

E. S. Dodge written, December, 1934.

Report of Inspection made December, 1934, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

* * * * * * * * *

(1) Introduction.

The hospital reservation is located in the western part of the city of Tuscaloosa, near the city line, on an elevation commanding a view of part of the city. The site first was donated to the University. It is bounded on the north by an housing property and Jackson Street, on the west by the property of the Governor' Home, on the east by adjacent property, Jackson Street and the Muscle Lyceum, and on the south by Hunter Avenue.

The reservation is now nearly an entirety, in spite of well encroachment and walks and roads and unsuitable buildings on the north and south sides. There is a brick wall on the east boundary, giving access to the north and south sides, and an iron fence on the west boundary. The grounds are well kept and have a number of fine old trees planted thereon.

The buildings are grouped in a pavilion group, consisting of an Executive building, kitchen and laundry building, two one-story wards, a one-story nurses' building, a fifty-one bed home, a yellow wood + frame's house of two stories and a mortuary.

The hospital group is located towards the western front, the stable is the southwestern and the Surgeon's House at the northwestern part of the reservation.

(2) History.

In 1922 a bon nave was purchased on the land of the Tide Water Pipe Line Company, owner of Indian Lumber, and began washing it for the 1st. The building was completed in October 1923. It was a modern one story three building with open verandas and a basement, and the Governor 1923,24,25, and could accommodate 120 patients. It was opened for the reception of patients on January 1st, 1927.

In 1927 this hospital was converted into a general military hospital. It had two hospital and nursing wards and 50 in Dr. Surgeons for the 1st of 1927,28. We only at about 1st years before in the hospital Minutes the recommend it above the 1st of Dr. Surgeon's Hospital was used the medical and nursing military. On July 1, 1933 the patients were transferred from Dr. Hurt's to the Tuscaloosa City Hospital where they remained until the new State Hospital was completed in 1934. The old building was in-adequate during the past year.

Congress in 1888, appropriated $100,000.00 for purchase of a site and construction of a Marine Hospital at Evansville, Indiana. The site cost $8,800.00, and the balance was expended on the buildings and grounds.

The hospital was completed and opened on January 25th, 1892, and has been conducted by the Service since that time.

(3) Need for a Marine Hospital.

Relief has been extended to sick and disabled rivermen at Evansville, since 1856. At the time of writing there are 25 patients in the hospital, and the prospects are that relief of rivermen will always be demanded.

The proximity of the Green and Tennessee Rivers with the commerce thereon in addition to that of the Ohio, increases the importance of the hospital station at Evansville.

(4) Adequacy of Plant.

The present plant is an old wooden hospital of the pavilion type. It is in bad repair and the expenditures necessary to modernize it are not justifiable. A new building of permanent structure with a capacity of 75 beds should be erected on the present site, and made a base or receiving hospital for the traffic on the Ohio and tributary rivers.

The estimated cost of such a plant including equipment is $250,000.00.

(5) Acquisition or Disposal of Land.

The present reservation of 10 acres is sufficient for the needs of the station, and none of it should be sold.

(6) Future Development or Disposal of Land.

The immediate construction of a modern hospital of 75 bed capacity has been recommended to replace the present unsatisfactory wooden structures. A hospital of this capacity will meet the needs of the river traffic for a considerable period. The plant should be so designed asto permit of economical expansion if additional facilities should be required.

This hospital will serve as a base for the traffic on the Ohio and tributary rivers.

II
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * * *

(1) Appropriation for Repairs and Preservation of Public Buildings
(for details see appendix A)
Total estimated cost of work recommended, $1,550.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended, 105.00

(3) Legislative Appropriation for New Construction
(for details see appendix C)
Total estimated cost of work recommended 251,500.00

Contracts in 1925, stipulating that, on the provision of a site and construction of a Centre Imperial at Tulsamville, Indiana. The site was $5,000.00, and the balance was expended on the buildings and grounds.

The hospital was completed and opened in January 1926, and has been conducted by the Service since then.

(c) Need for a Centre Imperial.

Behind has been assumed it also and provide pioneers at Tulsamville since 1926. At the time of writing there are 23 patients in the hospital, and the prospects are that period of pioneers will always be numerous.

The proximity of the Three and Tuscaness Rivers with the concrete thereon in addition to that of the Ohio, recommends the importance of the hospital station at Tulsamville.

(4) Adequacy of Plant.

The present plant is an old medical hospital of the pavilion type. It is in bad repair and the equipment unsatisfactory in numerous respects. Its sanitation. A new building of permanent structure with a capacity of 75 beds should be erected on the present site, but until a sum of money is budgeted for the train in the Ohio for temporary repairs.

The estimated cost of such a plant including equipment is $250,000.00.

(5) Availability of Internal of Land.

The present occupation of 15 acres is quite sufficient for the needs of the station, and none of it should be sold.

(6) Other Developments in Connection of Land.

The sanitation construction of a modern hospital of 75 bed capacity has been recommended to replace the present unsatisfactory medical establishment. A complete of this equipment will meet the needs of the Tulsamville Indian Agency. The plant should be an isolated unit complete in a considerable period. The plant should be an isolated unit complete in a medical equipment of sufficient facilities should be provided.

This hospital will serve as a base for the training on the Ohio and Grand Lake Agency.

II

Summary of Investment Requirements.

(1) Appropriation for Erection and Furnishing of Medical Establishment (for details see appendix A)

Total estimated cost of work recommended. $[illegible]

(2) Appropriation for Internal and Electrical Equipment of Public Buildings (for details see appendix B)

Total estimated cost of work recommended. [illegible]

(3) Legislation and Investigations for Soil Conservation (for details see appendix C)

21

(4) Appropriations for Administrative Equipment
(for details see appendix D)
Total estimated cost of items recommended. 2,746.00

TOTAL. $ 255,961.00

(5) Personnel.

Adequate.

III
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.
* *

(1) Buildings in General.

Building No. 1. Administration building. Two story and basement. Brick superstructure. Slate roof. Exterior brick surface painted. Basement has cement floor in one room only. The balance are dirt or boards laid on dirt. No finish or paint below first floor. Operating room has porcelain tile floor, base and wainscot. All other floors 3¼ D & M hard pine. Plaster walls and ceilings. Painted. Pine base and trim, painted. Second story floors in poor condition. Steam heat. Gas and electric light. Floor area 4866 square feet.

Building No. 2. Surgeon's residence. Two story and basement, painted. Slate roof. Basement has cement floors but no interior finish. Plastered walls and ceilings above basement, painted. Pine base and trim, painted. Floors 3¼ D & M pine, painted. Steam heat. Gas and electric light. Floor area 3642 square feet.

Building No. 3. Filter and tank house. One story. No basement. Brick superstructure. Painted. Cement floor, No interior finish or paint. No heat, no light. Floor area 100 square feet.

Buildings Nos. 4 and 6, Ward Buildings. One story wood frame on brick piers. Clapboard exterior. Shingle roof. Ward rooms have plastered side walls painted. Open truss roof. All other rooms have plastered walls and ceilings, painted. Toilet rooms have porcelain tile floors. All others are D & M hard pine. Steam heat, gas and electric light. Floor areas 3631 and 5631 square feet respectively.

Under the rear portion of building No. 6, a room has been constructed by boarding up between the brick piers to the underpinning, which has no interior finish or paint, and is used for storage for unserviceable property and a carpenter shop.

Building No. 5, Barn and Necropsy Room. One and one half stories. wood frame on brick piers. Clapboard exterior. Shingle roof. Necropsy room has plastered walls and ceilings, painted. Pine base and trim, painted. 3¼ D & M pine floor painted. Barn has no interior finish, no paint. 8" plank floor. Stove heat in necropsy only. Electric light. Floor area 1085 square feet.

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[illegible]

Building No. 7, Attendants Quarters & Laundry. Two story and ground level basement. Brick superstructure. Painted slate roof. Wood cornice with hanging gutters. Cement floor in all basement rooms except one in the laundry which has 3¼ D & M pine. Plastered walls and ceilings, painted. Pine base and trim painted. All floors above basement are 3¼ D & M pine. Steam heat. Gas and electric light. Floor area 3684 square feet.

Building No. 9, Paint House. One story wood frame. Boards and batten exterior including roof. 8" plank floor. No interior finish. No heat, no light. Floor area 148 square feet.

Building No. 8. Boiler house. One story brick suaperstructure. Roof corrugated iron on steel trusses. Hanging gutters. Cement floors. Interior brick walls painted. No interior trim. Boiler heat. Gas and electric lights. Floor area 1000 square feet.

(2) Offices.

Surgeon's Office. Located in the northeast corner of 1st floor of the Executive Building. It is a good sized room, well lighted but rather poorly furnished and most of the equipment is old and worn. A new desk, revolving chair, bookcase and rug are needed.

Pharmacist's Office. Opposite Surgeon's Office on first floor of Executive Building is a similar room and also poorly furnished. It needs a new desk, and a Globe-Wernicke filing case of five units.

(3) Visitors' Reception Room.

No special room for the purpose. The corridor of the Executive Building and the patients dining rooms at the ends of the wards are sometimes used for visitors to see patients in.

(4) Examining Room.

None. Examinations made in Surgeon's Office and Operating Room.

(5) Kitchen and Diet Kitchen.

The kitchen is located in southwest corner of first floor of the laundry building. It has a coal range, sink, refrigerator etc., No warming table. General equipment of utensils poor and new outfit has been asked for on special requisition.

Diet Kitchen. None. Food carried from the kitchen to the wards on trays through open corridor. No special means of heating at wards or rooms. Small gas stoves should be placed in each ward dining room for this purpose.

(6) Pantry and Food Storage.

A large pantry adjoins the kitchen between it and the attendants' dining room, which is used for the storage of groceries and kitchen supplies. An old worn out refrigerator is in service on the veranda near the kitchen. With a new refrigerator the space for the above named purpose would be ample.

(7) Store Rooms.

Store rooms for drugs, hospital supplies and glassware are locatedin the basement of the Executive Building. For bedding is a small room in basement of the laundry building, and for old records, miscellaneous articles and unserviceable property, in the basement or inclosed space under the north ward.

(8) Quarters for Officers.

Surgeon's Quarters. Located in a two-story and basement brick building placed to the southeast of the hospital group. It contains in all without the basement, thirteen rooms. Parlor, library, dining room, kitchen and bath-room on first floor. On second floor, six bedrooms and two bathrooms. These quarters are shabbily furnished, the furniture therein being old and worn. New furniture throughout is needed.

Acting Assistant Surgeon's Quarters. Consist of one room in the southeast corner of the second floor of the Executive Building, or Pharmacist's Quarters. This officer used the bathroom and toilet on the first floor of this building between the Surgeon's Office and dispensary. This room needs a new rug and a wardrobe.

Pharmacists Quarters. These consist of all of the rooms on the second story of the Executive Building, with the exception of one room reserved for the A. A. Surgeon. Only three of the seven rooms are occupied by the unmarried Pharmacist now in these quarters, viz; a bedroom, sitting room, and bath-room. Some new dishes are needed for the dining room.

(9) Quarters for Attendants.

Seven attendants have quarters on the second floor of the laundry building and one each in the nurses room of each ward. The furniture is old and worn. New bureaus, wardrobes, rugs and chairs are needed for each room.

(10) Patients' Dining Room.

One room for colored and one for white patients at the end of each ward. New chairs are needed for these rooms, and a small gas stove should be placed in each of these rooms for the purpose of warming food for patients after it is carried from the kitchen.

(11) Interns and Officers Dining Room.

This is a small room on the east side of the first floor of the laundry building and is used by the Acting Assistant Surgeon and the Pharmacist. The outfit is adequate.

(12) Attendants Dining Room.

This is a large room situated on the first floor of the laundry building and convenient to the kitchen. It is sufficiently furnished.

(13) Recreation and Smoking Rooms.

One small room in the east end of the south ward is used as a smoking room for white patients only. Colored patients are allowed to smoke in their ward. The smoking and recreation rooms originally designed for this

Belts from the factory, special problems and dimensions are considered at length in the Transmission Building. The building is a small room in a wooden structure, and the belts, on the pressure of inclosed space under the roof.

(4) Machines for Stitching.

Shoemaker's Quarter. Cordwain is a non-safety, low, Bonnerer lated building, and places on the outskirts of the original city. It consists in all activities the sex Bannerol, military, Tudor. Tudor, Elizabeth, Stuart, Georgian, Victorian or Lion Stuart. In general line, with Bonnerol and the Bonnerol. Their quarters are absolutely insanitary. The Jewish communities are not more. Now Jewish shoemaker is invited.

Adding Assistant Surgeon's Quarters. Consist of one room in one small corner of the second floor of the Shoemaker Building, or Shoemaker's Quarters. This either such the Surgeon and medical the first time in a new the and a surgeon.

Preliminary Quarters. These consist of well of the rooms on the ground floor of the Shoemaker Quarters, with the exception of one room reserved for the S. S. Surgeon. Each room of the above rooms has, generally by the municipal Shoemaker, one by inner partition, and a bathroom, and, but bathroom. Some the floors are needed for the dining room.

(5) Machines for Stitching.

Three stitching belt, machines on the second floor of the Shoemaker Quarters and each in the bottom room in each room. The Tudorbone is not and more. The Surgeon, machines, tube and shoeing-day benches are room.

(6) Leather Tables.

The room for workers and the for white leather of the end of each room. Each room is each of these rooms for the Surgeon, and a small one room small for Shoemaker is required from the kitchen.

(7) Machines and Machines Belting Room.

This is a small room on the ground floor of the Shoemaker Quarters and is used in the Belting Department. Machines and the Shoemaker, belts in machine.

(8) Shoemaker Finish Room.

Belt is fitted some shoemaker in the finish Room of the Shoemaker Quarters and machines, it is fitted. It is not Shoemaker Belting.

(9) Shoemaker and Leather Room.

The small room in the back of the well, small is used as a working for white leather shoes. Shoemaker workers are allowed to smoke in their work. The smoking and preservative room Shoemaker Tailoring Department.

purpose and located at the ends of the wards are now used, one for an officers' ward, and the other for a quiet room.

(14) Disinfecting Facilities.

There is no steam disinfector except for those bandages and instruments, which are located in the stair hall of the administrative building. A steam disinfector for bedding should be located in the basement portion of the north ward, Building No. 4. Patients clothing is disinfected when necessary by sulphur or formaldehyde in a closet next to the toilet in the end of the north ward, which is unsatisfactory.

(15) Incinerators.

There are none. Bandages, etc., are burned under the heating boilers. Garbage is collected by neighbors. A water jacketed incinerator should be installed in water heater closet of Building No. 6.

(16) Disposal of Soiled Linen.

Removed from the wards and rooms in bundles made of sheets. Badly infected linen is burned. Other infected linen is soaked in 5% carbolic solution or Bichloride solution 1-1000 before being sent to the laundry. There is no steam sterilizer on the station.

(17) Laundry Facilities.

A laundry, located in the basement of Building No. 7, is equipped with one steam engine, one Nelson Kreuter Co., washer, one Troy Centrifugal dryer, one Troy 72" mangle, one Troy shirt machine, one four-track steam dryer, one gasoline hard iron. one home-made galvanized iron soap boiler. An electric iron is needed, otherwise equipment is satisfactory and in good condition.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room. This is located in the southwest corner of the first floor of the Executive Building. It is a fair sized room and remains as originally designed when the hospital was built, except a tiled floor and wainscot which have been added since that time. Everything connected with operations is done in this room with the exception of sterilizing of dressings and instruments which is done in the hall adjoining the stairway. Washing up, etherizing, operations and sometimes surgical dressings are done in this room. The walls and ceilings are in bad condition and need repairs. It has a fair equipment and sufficient for the needs of the station, but a surgical dressing room should be provided, and a wash-up place could also be provided by placing a sink in the hall next to the stairway.

Surgical Dressing Room. No rooms for this purpose. One should be provided by placing a small building between the wards at the level of the floor porches and at the end of the corridor leading fm the Executive Building. This plan would make the dressing room readily accessible from both wards and the expense would not be great.

[illegible]

(10) [illegible]

[illegible]

(11) [illegible]

[illegible]

(12) Removal of Rotted Timber.

[illegible]

(13) Interior Decorations.

[illegible]

(14) [illegible]

[illegible]

Surface Drainage. [illegible]

[illegible]

Underground Drainage. [illegible]

[illegible] would not be great.

(19) X-Ray Facilities.

There are none at the station. Such work is done by contract with St. Mary's Hospital at a cost of $10.00 to $15.00 for each case.

(20) Laboratory.

A small room in the northeast corner of the first floor of the laundry building is used for this purpose. It has a small equipment and probably is sufficient for ordinary clinical work. Wassermann examinations would be sent to the Hygienic Laboratory at Washington, D. C.

(21) Dispensary.

Located in the northwest corner of the first floor of the Executive Building. Is a fair sized room. New shelving and a dispensing counter are needed, as the present fixtures are old, home-made, and rather unsightly. The equipment is otherwise sufficient for the needs of the station.

(22) Wards for Seamen.

There are two pavilion ward buildings each with a main ward 70 feet long with normal bed capacity of 16, maximum 20. Both wards are 28 feet wide and are open on both sides, with verandas 6 feet wide. There is no ceiling in either ward. One ward is used for colored and the other for white patients. In addition, there are two small rooms in the north and one in the south ward buildings, which are available for special cases or classes of patients. Ceilings should be placed in ward rooms.

(23) Quiet wards.

None specifically set aside for this purpose, but the three small rooms mentioned above provide ample facilities for the purpose.

(24) Wards for Revenue Cutter Officers.

None are provided for this purpose and none are required.

(25) Toilet Facilities.

Are adequate in size and range, except there is no separate toilet for syphilitics and none seems necessary at this time. Most of the toilet equipment is out of date, though still serviceable. Some new lavatories have recently been installed, but not in a secure or satisfactory manner, and should be improved in this respect.

(26) Portable Tubs.

There is one without a rack which is otherwise serviceable. Few cases of typhoid are admitted to hospital here.

(27) Padded Cells.

None. There is an old Humane Restraint apparatus on hand. There is no restraint sheet and no provision for the removal of violent alcoholic or insane patients to local hospitals. A restraint sheet should at least be

(XII) **Grain Buildings.**

There are some of the amounts. Small work is done in connection with Mr. Hurley's Building, of a loaf of 50,000 to 200,000 in for each area.

(XIV) **Laboratory.**

A small type in the milkhouse number of the Fund Lines of the Dominion Building is used for this purpose. In the a small experiment was provided in addition for primary chemical work. Laboratory facilities would be met in the Grimsby University at Hamilton, M. P.

(XV) **Elevators.**

Included in the elevator number of the first floor of the Dominion Building. In a dry place room. The elevator and a transporting machine are needed, as the present therefore are old, inconvenient, and rather dangerous. The elevator is extremely necessary for the needs of the business.

(XVI) **Yards for Cattle.**

There are two yards, wood buildings each with a main wood 70 feet long with barbed fence property at 18, Hamilton St. Small number can be that will use are to be in order, with remodeled a last stock. There is no holding in a fair area. The need is based for delivery and the other for delivery purposes. In addition, there are the small yards to the north and one in the north with facilities, which are available for special stock or shows at the north. Buildings should be placed in each room.

(XX) **Cattle Scale.**

Some qualitative and scale for the purpose, the in other small cases, and the other provide scale facilities for the purpose.

(XX) **Yards for Dressing Stock Stalls.**

There are yards for this purpose and small for pigs.

(XX) **Water Facilities.**

The facilities of water and small, water there is no necessary facility for stalls and some lack necessary at the time. Small of the water will change in any of date, through water situation. Some are insufficient that are small but, but not in a water or facility connection which is required in this purpose.

(XX) **Drainage Tile.**

There is the without a pipe which is otherwise available. The drain or cylinder are required at Dominion Lines.

(XX) **Public Scale.**

None. There is no air house commercial application in use. There is some restriction which can be provided for the manual of product statistics by Dominion publication in Local Analysis. I recommend about stocks of land by

provided.

(28) Negropsy Facilities.

Are provided in a room in the barn supplied with a good table and a lead lined sink, each with sewer connections. The facilities are ample for the present only.

(29) Isolation Facilities.

Contagious cases are sent to the city hospital. Suspect cases are taken care of in a small room in the east end of the north ward. Facilities adequate for the present.

(30) Out Patient Office.

Three rooms are rented in a building on the river front. One room is used as an office and dispensary, one small room as a surgical dressing room, and a large room at the rear is used for storage and fuel. The rent paid is $30.00 per month. Chairs, revolving and plain required. A Barber's stove is used for heating hot water.

(31) Floor Space.

In the hospital group proper, namely the Executive Building, the two pavilions wards and the attendants building, including the boiler house addition thereto, the total net floor space is as follows:

Basement	5584	square	feet.
First Floors	9190	"	"
Second Floors,	2320	"	"
	17094	"	"
Total hall space	1718	"	"
T O T A L	18812	"	"

In this group the total net floor space for hospital uses is		76%
" " " " " "	quarters (except halls) is	15%
" " " " " "	halls (including quarters)	9%
		100%

The surgeon's quarters are in a separate building devoted entirely to this purpose, Total floor space is 5642 square feet.

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 40 beds, maximum 50. On a normal basis each patient has 120 square feet of floor area and 1900 cubic feet of air space computed on a height of 16 feet to each. The two main wards are open to the roof.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914, and also for the period from July 1st, to November 30th, for the calendar years, 1913, and 1914.

provided.

(vi) Shower Facilities.

Are provided in a room in the main adjoining with a good hot-and-cold supply, tiled walls, with water connections. The facilities are reqd for-lor present only.

(vii) Laundry Facilities.

Laundries were not met in the city inspected. Occupants some are taken care of in a small room in the back end of the main room. Facilities are-ments for the present.

(viii) Out Buildings Outside.

Those rooms are located on a building on the rear lines. The room is used as an office and classroom, one small room is a personal dressing room, and a large room at the rear is used for storage and that. The back yard is 20ft.32 per month. Clean, remaining are quite required. A Dwelling's room is used for cooking and washing.

(ix) Class Room.

In the hospital group itself, hourly in Tuberculosis department, the ex-patients works and the ultimately medicinal, therefore the social worker ad-ellen Interest, the total net floor space is as follows:

Summary	8844 square feet.
First Floor	9190 " "
Second Floor	2820 " "
	17854 "
Total Bed space	1114 " "
T O T A L	18968 " "

In line area the social aid Club- space for hospital use is 792
" " " " " " " quarters (accept halls) is 1187
" " " " " " " halls (including sanitary) 1
1980

The outpatients department is a separate dwelling remote entirely on this purpose. Total floor space is 5840 square feet.

(xi) Bed Capacity and Floor Allowed.

The total normal capacity of the hospital is 82 beds, maximum 71. On normal basis each patient has 1320 square feet of floor-space and 1000 cubic feet of air space provided on a height of 12 feet to ceil. The two main wards are open to the roof.

(xii) Patient Accommodation and Food.

The following table shows the relief afforded to the patients by the Ilford Poor Law, 1930, (xii), and also for the weeks from July 1st, to December 31st, for the minimum period, 1931, and 1932.

	Fiscal Years.			July 1 to Nov. 30th.	
	1909	1913	1914	1913	1914
Number days hospital relief furnished	3166	3248	4784	1248	1631
Daily average hospital patients.	8.7	8.9	13.1		
Total daily cost per hospital patient	----	4.00	3.27		
Number of hospital patients.	232	231	309		
Number of outside patients.	318	364	462		
Number of times treated,	445	494	649		

On December 15th, there were 24 patients of whom 4 were chronics. Tubercular patients, none. Of the 24 patients, 11 were white and 13 colored. The maximum in the hospital since 1911 was 25, minimum 4. Records nor readily available prior to that but it is probable that this is a s large a number as has been cared for in recent years. The number of days hospital relief furnished in 1914 was 47% greater than in 1913, and 51% greater than in 1909. For the five months of the present fiscal year it has been 31% greater than for the same period of last year.

With the exception of 1913, when the relief furnished fell off 25% from the previous year, there has been a steady increase for the last 5 years. The number of out patients and times treated was approximately 30% and 50% more in 1914 than in 1909.

(34) Ambulance Service.

Station has an old one-horse ambulance which is used for all calls. The requirements are small, only one call in last three months, and present facilities are adequate.

(35) Heating, Power Plant and Ventilation.

All buildings requiring heat are supplied from a central heating plant located in building No. 8, with direct steam radiation through wrought iron and cast iron column radiators. The plant is ample and efficient. Power for laundry is supplied from heating plant boilers which operate at 50 to 80 pounds pressure, Also for heating hot water tanks in each building. Steam radiation is run at 5 to 8 pounds through a pressure reducing valve. Ventilation is by doors and windows, which is ample.

(36) Illumination.

The buildings needing light are now illuminated by gas, but electric wires have been installed in steel conduits and a contract has been let for the installation of fixtures which are now on the site. This will be ample, though not of approved design as to those for the wards.

(37) Decoration.

The buildings are being re-decorated by the station force and while not of approved colors, will be a needed improvement and ample for present needs.

(38) Telephone and Call System.

There is one direct connected city phone in Pharmacist's office. There

is no inter-communicating telephone system. The station has a call bell system with annunciator in Pharmacist's office also sound signals on bells at the same station. There is a portable watchman's clock system. Facilities adequate.

(39) Ice and Refrigerating Facilities.

There is no refrigeration plant and none is needed. Artificial ice is supplied as desired to old and worn out ice boxes, which should be replaced by new ones.

(40) Water supply and Fire Protection.

Water is obtained from 4" city main on Illinois Street through 2" connection to tank house, the various buildings being connected to discharge line from elevated tank. The elevation of the tank)capacity approximates 3000 gallons) is not muc above the second floor of the Surgeon's quarters and is only sufficient to furnish water to the second story. A cross connection is provided so that city pressure may be used. The source of supply is the Ohio River, and is ample. The water is filtered by the city and re-filtered by the hospital so that the quality is good. The pressure at the hospital is deficient (15 to 20 pounds) due partly to the small size of main within the hospital grounds and the elevation of the site. The normal city pressure at city pumping station (pump pressure) is 56 pounds, but in case of fire is raised to 80 pounds. The city contemplates in the near future erecting a stand pipe on elevated ground not far from the hospital reservation.

There are 5 combination fire plugs and lawn hydrants for 2" hose connections about the buildings and one city fire hydrant on Government property just outside the main gate on approach to Illinois Street.

There are 5 hose reels with 100 feet of 2" linen hose and nozzle, one on each building except the stable. There is one wheel hose reel and 250 feet of 2" rubber lined fire hose.

There are 12 chemical fire extinguishers of the three gallon Underwriter type well distributed among the various buildings. Condition of the equipment is good and adequate for present condition.

(41) Fire Alarm System.

The station has a fire bell in the rear of Executive Building struck by hand. Drills are held weekly. City fire engine house is four blocks away and signal box two blocks. Facilities adequate,

(42) Sewer and Other Drainage.

Storm water and sewerage is taken care of in a combined system and discharged through 10" vitrified sewer into 15" city sewer in Illinois Street. Branches lead to the various buildings. System is in good condition and adequate.

(43) Streets, Roads, Walks, Fences, and Grounds.

There is a macadam roadway with brick gutters leading from the foot of

Illinois Street at Martin Avenue, (now closed) to the entrance gates of the reservation, and then to the various buildings. It is in good condition and adequate. There are narrow cement walks between the various buildings which are adequate. The cement walk which has been proposed from foot of Illinois Street and Executive Building, although a desirable improvement is not warranted by present conditions and is not recommended.

On the east side of the reservation there is a brick wall with iron grill driveway and pedestrian gate. The approach to this entrance, 127 by 60 feet from Martin Avenue (now closed) at foot of Illinois Street is not fenced, and none is required. The proposition to fence this area in and move entrance gates east to Martin Avenue is not recommended.

The north and south sides of the reservation for 600 feet have a wooden picket fence in good condition. For a distance of about 180 feet on the boundary there is a stone retaining wall in good condition. In the event that the lots abutting on the property are graded down, or an alley is constructed here, it may be necessary to extend the retaining wall to the eastward about 75 feet. The footing of the present wall is said to extend 3 to 5 feet below the grade of Franklin Street, and the wall itself would probably be stable with the re-established grade.

For about 180 feet on the south boundary there are two stone retaining walls in good condition.

The wooden fences on the North and south boundaries are connected at their west ends by a wood post and wire mesh fence, dividing the reservation into two parts. The remainder of the reservation is enclosed by wood posts and wire mesh fences. The wire fences are in fair condition, but will need minor repairs from time to time.

The area about the buildings is elevated, well kept and presents a pleasing appearance. The rear of the reservation is lower, is left in its natural state and is sufficiently well kept for the purpose.

(44) Wharves, Sea Walls, Etc.,

None. No water front.

(45) Live Stock, Vehicles, etc.

The station has one horse, one single horse ambulance, one spring wagon and one dump cart, all in fair condition. Horse is 20 years old. A new surrey is on requisition to replace one recently condemned. Facilities adequate.

(46) Personnel.

There are on duty at this station 1 commissioned officer, (a Surgeon) 1 acting assistant surgeon, 1 pharmacist, and 9 attendants classed as follows: 1 engineer, 1 laundryman, 1 cook, hostler, 1 yard man, 1 nurse, 1 fireman, 1 watchman, and 1 messenger.

(47) Records.

The records of the station are properly kept with the exception of the clinical records, which are rather brief and incomplete.

(48) Books.

The medical books in the station are old and not of much use for reference.

(49) Purchase of Supplies.

Supplies are purchased on yearly contract with daily deliveries, The opinion of the medical officer in charge and the pharmacist is that it would be advantageous to purchase supplies on three months accepted proposal, and better still to purchase in the open market.

APPENDIX A.

Marine Hospital at Evansville, Ind.

Appropriation for Repairs and Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report	ITEMS	Estimated Cost.
14.	Fitting up room in Building No. 4 for steam sterilizer.	$ 300.00
18.	Repairs to plaster and painting room.	100.00
18.	Placing partition in hallway at stairs to make sterilizing and washup room.	150.00
22.	Ceilings in ward rooms of buildings nos. 4 and 6.	1,000.00
		$1,550.00

6-6-16
$ 374.00 spent on repairs in A. and other items, per

APPENDIX B.

Marine Hospital at Evansville, Ind.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report	ITEMS.	Estimated Cost.
18.	New sink and piping in hall of Building No. 1, for washup and sterilizing room.	$ 100.00
25.	Refastening lavatories in toilets of buildings Nos. 4 and 6.	5.00
		$ 105.00

APPENDIX C.

Marine Hospital at Evansville, Ind.

New Construction.

* * * * *

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report	ITEMS	Estimated Cost.
18.	New building for surgical dressing room.	$1,500.00 X
	New Hospital building and equipment.	250,000.00
		$251,500.00

See letter 10/2/15 to Secy.

APPENDIX D.

Marine Hospital at Evansville, Ind.

Administrative Equipment.

* * * * * * *

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report	ITEMS	Estimated Cost.
14.	Steam Sterilizer.	$ 1,000.00
30.	Office (out patient)	8.50
2.	Office (hospital)	220.00
22.	Wards.	299.00
21.	Dispensary	50.00
5.	Kitchen.	175.00
10.	Dining Rooms.	50.00
17.	Laundry	6.00
8.	Officers quarters.	580.95
9.	Attendants quarters.	206.55
15.	Water jacketed incinerator	150.00
		$2,746.00

APPENDIX E.

NATION Bureau of Investigation, Inc.

Administrative Department.

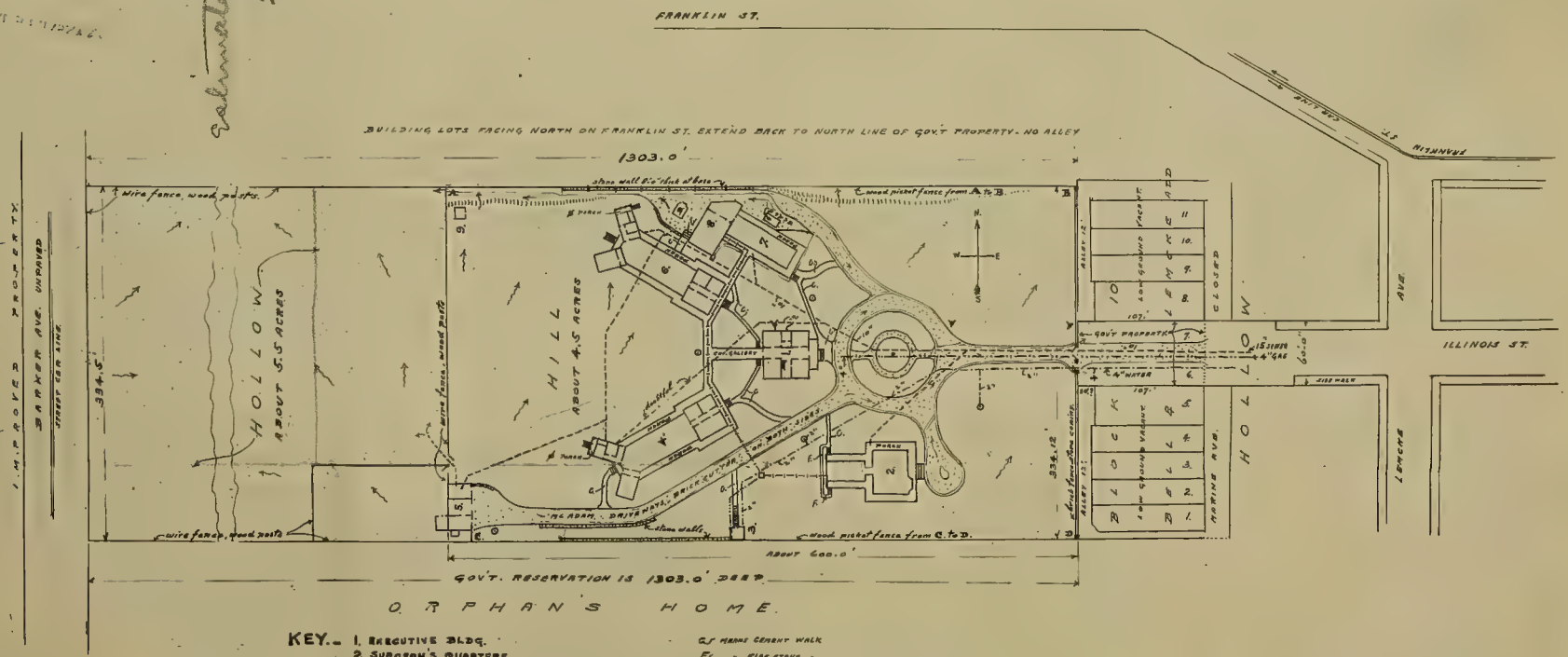
* * * * * * *

ADMINISTRATIVE expenses must usually be immediate payment.

Paragraph of report	Item	Estimated Cost.
14.	Wound Plaintiffs.	$ [illegible]
15.	Office (not yet rented)	[illegible]
7.	Office (leasehold)	[illegible]
20.	Books.	[illegible]
20.	Stationery	[illegible]
[illegible]	Fixtures.	[illegible]
20.	Rising Sun.	[illegible]
27.	Supply	[illegible]
8.	Office supplies.	[illegible]
9.	Attorneys retainer.	[illegible]
11.	Other pending investigations	[illegible]
		$[illegible]

25

Estimated Tent capacity 271



KEY.— 1. EXECUTIVE BLDG.
2. SURGEON'S QUARTERS
3. TANK HOUSE
4. SOUTH WARD.
5. STABLE & DEAD HOUSE
6. NORTH WARD.
7. LAUNDRY & ATTENDANTS QUARTERS
8. BOILER HOUSE
9. PAINT HOUSE.

SOLID RED LINES SHOW BRICK GUTTERS.
RED STIPPLING SHOWS McADAM PAVEMENT.
B. MERAMS BRICK PAVEMENT.
W. = WOOD STEPS.
C. = CEMENT " (1 ONLY)
PORCH = PORCH WITHOUT ROOF (2 ONLY)

C.S. MERAMS CEMENT WALK
F.S. = FLAG STONE "
⊕ = COMB. FIRE PLUG & STREET WASHER 2" DIAM. (5 ONLY)
+ = CITY FIRE PLUG. (1 ONLY)
V = ELECT. LIGHT POLES (3 ONLY)
= BRICK TUNNEL FOR STEAM & RETURN.
= 1" UNDERGROUND STEAM & RETURN (1 ONLY)
= SEWERS.
= WATER.
= GAS.
= FLUG STOPS.

NOTE! STONE RETAINING WALL ALONG NORTH LINE OF PROPERTY HAS A MAXIMUM HEIGHT OF 23'-6"; ITS FOOTING IS ON SHALE "ON ROCK" PROBABLY 3'-0" TO 5'-0" BELOW GRADE OF FRANKLIN ST.

U. S. MARINE HOSPITAL
EVANSVILLE IND. JULY 1914
Scale 1" = 50 feet.
R.E.F.

· U · S · MARINE · HOSPITAL ·

EVANSVILLE INDIANA

SURGEON'S RESIDENCE (NORTH)

SURGEON'S RESIDENCE (WEST)

NORTH FENCE & GUTTERS

TANK HOUSE & WEST BOUNDARY

SURGEON'S RESIDENCE

ATTENDANTS' QUARTERS

NORTH WARD FROM SOUTH-WEST

SOUTH WARD FROM WEST

SOUTH WARD FROM REAR

SOUTH WARD FROM SOUTH-EAST

LAUNDRY & ATTENDANTS' SHELTERS

SHELTER HOUSE

STABLE & MEDROOM

PAINT HOUSE

JTC

October 2, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Evansville, Indiana, except the construction of a new dressing room which will be unnecessary if a new hospital building is authorized by Congress.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

(Signed) Rupert Blue.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

FORT STANTON, NEW MEXICO.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

H. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

FORT STANTON SANITORIUM, FORT STANTON, NEW MEXICO.

Report of inspection made March, 1915, with recommendations as to policy to be pursued.

I
GENERAL CONSIDERATIONS.

* * * * * * * * * * * *

(1) Location.

Fort Stanton Sanitorium, conducted by the U. S. Public Health Service, is located on the right bank of the Rio Bonita, a mountain stream having its source in the White Mountains. It has an elevation of 6230 feet above sea level, a rainfall of from 14 to 17 inches annually, and the climate is dry, stimulating and salubrious.

The latest survey estimated the area of the reservation at about 43 square miles. About 12,000 acres of this is good grazing land and the remainder, except where the buildings are located, is unused.

The station is located in Lincoln County, New Mexico, six miles distant from Capitan, a station on a branch of the El Paso and Southwestern Railroad, 21 miles from Carrizozo, on the main line of the same road, and twelve miles from Lincoln, down the Bonito Valley, and the former county seat. Carthage, on the Atchison, Topeka and Santa Fe Railroad, is distant about 100 miles.

The valley of the Rio Bonito at the station is about one half to three quarters of a mile wide, and the reservation on which the buildings stand is about 75 feet above the bed of the stream.

The original part of the reservation, on a portion of which the hospital buildings are located, is in the form of aparallelogram, two miles wide by eight ~~miles~~, and comprises about sixteen square miles.

The main buildings are grouped on the four sides of a central court, oblong in outline, and formerly the parade ground when the reservation was an Army Post. The tent houses for patients and marine officers are located on the south and west sides of the reservation, those for Service and other officers east of the Pharmacist's Quarters, the dairy and corral to the eastward of the Power House and the other corrals in the river valley to the northwest. To the south of the marine officers tent houses are quarters for single attendants; to the east of the Executive Building, quarters for married attendants and still farther eastward the barn for hay storage.

(2) History.

A reservation for Fort Stanton, N. M., comprising about 12 square miles (144 miles in area) was declared by President Buchanan on May 12, 1859, according to a survey made by Captain I.N.Macomb, Topographical Engineer, in

August and September, 1857, under orders of Brevet Brigadier General J. Garland, commanding the Military Department of New Mexico. Another survey was made in 1868 with the object of reducing the size of the reserve and by act of Congress, May 21, 1872, 138 square miles were tranferred to the Interior Department and thrown open for settlement under the land laws.

A tract 8 miles long and 2 miles wide on the south bank of the Bonito River was reserved for military purposes. A re-survey of this tract was made in August, 1876, and the boundaries corrected as they now stand.

Fort Stanton was established in 1855 to control the Mescalero and White Mountain Apache Indians. The post was burned and abandoned in 1861 by the United States forces upon the approach of the Confederate troops from Texas. In the Spring of 1863 after the defeat and withdrawal of the Confederates, the fort was again occupied by United States volunteers and temporary repairs made to the old buildings.

Substantial stone barracks, quarters, officers, storehouses, etc., were erected from 1868 to 1871, or adapted from the old buildings whose walls had been left standing in 1861.

The post was abandoned for military purposes on August 26, 1896, and turned over to the Interior Department.

In 1899 the Marine Hospital Service decided to establish somewhere in the arid southwest, a sanatorium for the care of cases of tuberculosis, then confined in the different Marine Hospitals throughout the United States. A Medical Officer, of the Service (J. O. Cobb) was detailed to make a survey and report on suitable location in Arizona or New Mexico. He recommended Fort Stanton in Lincoln County, New Mexico, and as this was approved by the Surgeon General (Walter Wyman) and the Secretary of the Treasury, on April 1, 1899 and an Executive Order was issued which transferred the reservation to the Marine Hospital Service for Sanatarium purposes. By Executive Order an addition was made to the original reservation on November 1, 1899, making the total 43 square miles instead of 16 square miles.

The station was opened on April 27th, 1899, and the first patient was received on November 18th of the same year. This was the first sanatorium opened by the United States Government for the treatment of tuberculosis.

When the station wasfirst opened, Almagerda on the main line of the El Paso and Southwestern Railway wasthe nearest railway station, distant about 75 miles. This entailed much labor and expense in transporting patients and supplies. In 1899 the railroad was extended to Carrizozo, and in the following year a branch road was built to Capitan, N. M. thus bringing the Fort Stanton station within six miles of the railway.

The station was refitted and altered to suit the purpose for which it was occupied, a cattle range and farm established, power and refrigerating plants added and the system of water supply improved.

The principal supply of water wasfrom the Bonito River, and a sunken well near the bed of the river. In December 1909 the El Paso and Southwestern Railway diverted part of the water from the Bonito river across the mountains to Nogal and Corrizozo and in the year 1912, made a further diversion from that stream. This action on the part of the railroad has greatly

diminished the water supply of the station in dry seasons and a suit is now pending by the United States against the railroad on this account. The present supply of the station is dependent on flood waters in the Bonito, and deep and driven wells in the bed of that river.

(3) Need for a Tuberculosis Sanatorium.

The present station is the first one established by the National Government, and has served a useful and humane purpose in relieving Marine Hospitals of tuberculosis, offering hope of recovery and arrest to many hopeless ones, and as a public health measure in diminishing the numerous centers of infection in Marine Hospitals and vessels of the American Merchant Marine.

The necessity for such an institution is apparent and the principal question is as to its location. The present site is difficult of access, has an insufficient water supply, is expensive to maintain, and although the climate is suitable for incipient and uncomplicated cases of tuberculosis, the altitude is unsuitable for confirmed and advanced cases and those suffering from visceral complications. A situation at a lower level, with an assured water supply and better railway communication would be more desirable.

The establishment of a single tuberculosis sanatorium for the Government services, the Army, Navy and Public Health Service, might be accomplished, and the selection of such a site might safely be left to a board of officers experienced in such work.

A location on some of the higher plateaus of North or South Carolina, or Georgia (with water, fuel and transportation facilities) for the eastern and middle states, and a smaller institution of like character located in a desirable position on the Pacific, is suggested.

(4) Inadequacy of Plant.

The present plant is inadequate in water supply, accessability, hospital accommodations and the altitude (6330 feet) is too high except for selected cases of tuberculosis.

Stations should be established at lower levels at points more accessable and the present station disposed of. See Paragraph 3, Section I.

Immediate repairs and betterments needed to keep the plant in operation pending its definite disposal should however be made and are provided for under section III.

(5) Acquisition or Disposal of Land.

The reservation contains approximately 27,520 acres, which is ample for all possible needs. Much of this land is, of course, useless, but much more than is now used might be reclaimed to pasturage if wells were judiciously distributed to supply water to range cattle. Approximately three wells are particularly needed, and if supplied would open to grazing about 6000 acres of pasturage now beyond the travel range of cattle. There appears to be no reason for eith larger or smaller holding of acreage.

(6) Future Development or Disposal of Plant.

Attention is invited to paragraph 3, Section I for recommendations as to future policy to be pursued.

II

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* *

(1)	Appropriation for Repairs and Preservation of Public Buildings (for details see appendix A) Total estimated cost of work recommended.	$ 4,025.00
(2)	Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B) Total estimated cost of work recommended,	2,000.00
(3)	Legislative Appropriation for New Construction (for details see appendix C) Total estimated cost of work recommended	15,800.00
(4)	Appropriations for Administrative Equipment (for details see appendix D) Total estimated cost of items recommended,	6,040.00
		$27,865.00
(5)	Personnel.	
	Increase in pay of Property Clerk ($25.00 per month)	300.00
	TOTAL	$28,165.00

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

* *

(1) Buildings in General.

Most of the buildings on the reservation were taken over from the Army when they were built for army post uses, and are either stone masonry or adobe superstructures with wood framed roofs and timber work. All are old, but have been kept in good repair, but as always, the older the building, the more constant the need of repairs, and this condition will continue to exist as long as the station stands. Generally the interiors of buildings have plastered walls and ceilings, hard pine floors, pine trim painted, there being no natural finished woods or special treatment. Many of the buildings are badly in need of remodeling for better economy of operation, particularly the powerhouse and laundry. Dairy barns, horse barns, farm buildings, and stone houses. These will be treated under separate paragraphs under this heading and the recommendations made therein are based on the assumption of at least ten years occupancy. The accompanying form shows fully details not explained herein.

The quarters for married attendants will soon need extensive repairs, as they are fast becoming uninhabitable, and it is believed that instead of re-

pairing these it would be cheaper to build new quarters under a single roof similar in arrangement to officers quarters. These should be similar in design and not expensive in construction. Sand and gravel being in abundance on the reservation, it is believed concrete would prove the cheapest and best for superstructure generally, rather than wood framed buildings.

The tent houses are all that could be desired as to arrangement, and it is believed, are well adapted for their needs. Permanent structures of this type if built, could well be all concrete, but if that proves too expensive, then to window ledge height, and frame construction above this would make disinfecting simple and effective. The present tent-house village however, should be supplied with board, cinder or concrete walks connecting houses on each street as in wet weather these streets are veritable mud holes.

The buildings are generally well cared for, but their construction and arrangement makes better appearance well nigh impossible, at least very costly many of the floors in all the buildings are very old and need renewing. It is believed this can be done by the station force to better advantage than by contract, provided materials are supplied.

Building No. 21, storehouse for farm machinery, is an old adobe one-story building without floors or interior trim; is fast falling to decay and is beyond economical repair and should be replaced by a new frame building sufficiently large to store all farm machinery and vehicles of every kind, such a building need have no heat, light, floors or trim, but should have a room at or near the center for repair work on the property stored therein. Such a building should cost about $2,500.00.

A number of improvements are under way at this time and much of this class of work is being done by the station force and ambulant patients who are able to work. Very liberal support should be given the management with respect to these repairs, etc., which is conservative, efficient and capable.

The hog houses are merely leanto shelters made of refuse scraps of lumber, and afford scant shelter from the weather and none at all from cold winds and blowing rains, thereboing no separation at all for breeding pens and the care of young pigs. This is an important factor in farm production and can be made a handsome paying investment.

Good breeding and feeding pens should be provided and sufficient hog wire fencing to inclose adequate yards to separate herds or droves. These should be placed near or adjoining the beef corral and killing pens so that offal will be discharged into the hog yards. At present this offal must be hauled one mile to the hog yard for disposal, the cost of necessary equipment for hogs would be about $1000.00. Photo illustrates present equipment.

Beef Killing Pen and Corral. The killing pen is merely aconcrete slab under an open shed roof without any protection whatever from either weather or flies, and is as far north of the feed house as the hog pens are south of them. Beef when first killed must be hung up in the open overnight to cool. All killing must be done at night in summer, on account of the flies. These conditions are very primitive and unsanitary. (see photos) A new killing pen and house should be built immediately adjoining the proposed new hog yards below the Sanatorium so that offal may be disposed of without hauling, and a cooling room efficiently screened from flies be provided for

hanging dressed meats till cool enough for the cold storage. The cost of such an equipment would be approximately $1000.00 to $1500.00 and would pay a good dividend in increased efficiency and economy of time over present methods. The present equipment is clearly shown in photographs marked for identification. A building is also badly needed for a blacksmith shop. Estimated cost $800.00.

The General Construction of Each Building is As Follows:

Building No. 1. Residence of Medical Officer in Charge. Two story stuccoed adobe superstructure. Wood cornices and veranda. Shingle roof, with one story wing of same material and finish. Walls are plastered adobe, ceiling lath and plaster. All plaster papered or painted. 3¼" D & M pine floors. Pine base and trim, painted. Steam and fire place heat. Electric light. Floor area 4278 square feet.

Building No. 2. Residence of Junior Medical Officer. One story stone masonry superstructure, with wood veranda. Shingle roof. Plastered walls and ceilings, papered or painted. 3¼" D & M pine floors. Pine base and trim, painted. Steam and fire place heat. Electric light. Floor area 2246 square feet.

Building No. 3. Pharmacist's quarters. One story stuccoed adobe double house with wood framed gable heads and roof and veranda. Papered or painted. Pine base and trim and ceilings, papered or painted. Pine base and trim, painted. 3¼" D & M pine floors. Steam and fireplace heat. Electric light. Floor area 4068 square feet.

Building No. 4. Clerks Quarters. Two story structure, stone masonry one story, second story wood framed, with gambrel roof in front and gable roofs on three rear wings. All shingled, with wood framed veranda across the front. Plastered walls and ceilings, painted. Pine base and trim, painted. 3¼" D & M floors. Steam and fireplace heat. Electric light. Floor area 7061 square feet.

Building No. 5. Power, Refrigerating and Laundry building. One story pebble concrete superstructure. Wood framed roof, covered with sheet steel. Two one story wood framed additions have been added to original structure for power house and cold storage uses. The engine room, steam sterilizer room and laundry, folding room have plastered walls, D & M ceilings, cement floor and base. Ammonia compressor room has dirt floor, All other rooms have cement floor with out base and no interior finish or paint. Steam heat. Electric light. Floor area 7454 square feet.

Building No. 6, Patients Dining Room, kitchen and kitchen storerooms. A one-story stone masonry and adobe superstructure, with wood framed verandas and gambrel roof, shingled. Dining room has D & M wainscot varnished. Plastered walls and art metal ceilings, painted. 3¼" D & M pine floors. Kitchen and storerooms have plastered walls, and ceilings, painted. Cement floors and base. Pine trim, painted. Other rooms have plastered walls, painted. Pine base and trim painted. 3¼" D & M pine floors. Steam heat. Electric light. Floor area 10,266 square feet.

Building No. 7. Executive, Laboratory and Dispensary Building. One story stone masonry, with wood framed gambrel roof, and verandas shingled.

Plastered walls, painted. B & M ceilings varnished. Pine base and trim, varnished or painted. 3¼" D & M pine floors. Steam heat. Electric light. Floor area 3711 square feet.

Building No. 8. Carpenter Shop. One story stuccoed adobe. Wood framed roof and veranda shingled. No interior finish. 3¼" D & M pine floors. No heat. Electric light. Floor area 1282 square feet.

Building No. 9. Post Office, Store and Recreation Rooms. Two story. First story stone masonry, second story wood framed, with creosoted shingle exterior. Gambrel roof, shingled. Wood framed veranda with tin roof. Plastered walls and ceilings, unpainted. Pine base and trim painted. 3¼" D & M pine floors. Stove heat. Electric light. Floor area 3441 square feet.

Buildings Nos. 10 & 11. General Hospital. One story stone masonry superstructure. Shingle roof. Plaster walls & art metal ceilings, painted. Pine base and trim, painted. 3¼" D & M pine floors. Stove heat. Electric light. Floor area 6469 and 5757 respectively. There is a one story wood framed addition at the rear of Building No. 10, used as a quiet ward, which has the same finish throughout as above described.

Building No. 12. Farmers Office & Store House. One story stone masonry superstructure. Wood framed roof, shingled. Plastered walls and ceiling. Pine base and trim painted. 3¼" D & M pine floor in two rooms only. Balance of building has 12" plank floor, but no interior finish. Stove heat on office room only. Electric light. Floor area 3740 square feet.

Building No. 13. Junior Officers Quarters. Five apartments. Two stories. Stone masonry superstructure, one story high. Balance wood framed with gambrel roof, shingled. Plastered walls and ceilings, painted. Pine base and trim, painted. 3¼" D & M floors. Steam and fireplace heat. Electric lights. Floor area 8521 square feet.

Building No. 14. Plumbing Shop. One story adobe. Shingle roof. No. interior finish. Wood and dirt floors. No heat. Electric light. Floor area 725 square feet.

Building No. 15. Chief Engineers Residence. One story, stuccoed adobe. Tin roof on wood frame. Plaster walls and ceilings, painted. Pine base and trim, painted. 3¼" D & M pine floors. Steam heat. Electric light. Floor area 1093 square feet.

Buildings 16, 17, 18, 19, & 20. Range Attendant and Married Attendants Quarters. One story adobe. Wood framed roof with rubberoid covering. Plastered walls and ceilings. Pine base and trim painted. 3¼" D & M pine floors. Stove and fireplace heat. Electric light. Floor areas 3220, 925, 1667, 1710 and 1260 square feet respectively.

Building No. 21. Farm Implement and Lumber house. One story adobe with wood frame. Shingle roof. No interior finish. Dirt floors. No heat. No light. Floor area 1600 square feet.

Building No. 22. North pump house. One story adobe. Wood frame roof, rubberoid covered. No interior finish. 3¼" D & M pine floor, one room only. Balance dirt floor. No heat. Electric light. Floor area 200 square feet.

Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Town water. Electric light. Floor area 2700 square feet.

Building No. 3. Storehouse Office. One story frame shed. Dirt floor. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 4. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 5. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 6. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 7. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 8. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 9. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 10. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 11. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 12, 13, 14, 15, 16, 17. Single dwellings and double dwellings. Good frame and brick. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 18. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 19. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 20. Two-story frame dwelling. Good frame and brick house. Two stories. Five rooms and trim. Outhouse on premises. Well. 2 B & S gas fixtures. Electric light. Floor area 1500 square feet.

Building No. 25. Hen House. One story, wood frame. Board and batten exterior unpainted. Shingle roof. No interior finish. Dirt floor. No heat. No light. Floor area 1350 square feet.

Building No. 26, Carriage House. One story wood frame. Board and batten exterior, unpainted. Corrugated iron roof. No interior finish. 8" plank floor. No heat. Electric light. Floor area 1500 square feet.

Building No. 27. Horse and dairy barns. One story wood framed. Built in part of old stone masonry fence walls. Wood framed. Shingled roofs. Part of dairy barn has cement floor. Balance has dirt floor. Buildings have no interior finish and are unpainted, except that two rooms in milk house section have plaster walls and ceilings. Cement floor and base. Pine trim painted. No heat. Electric light. Floor area under roofs, 38,240 square feet, in dairy section, and 5952 square feet in horse barn section.

Building No. 28. Hay Barn. One high story. Wood frame. Board and batten exterior. Rubberoid roof. No interior finish. Dirt floor. No heat. No light. Floor area 3900 square feet.

Building No. 30. Tailor shop. One story adobe with wood framed roof with rubberoid covering. Plaster walls and ceilings. 3¼" D & M pine floors. Pine base and trim, painted. Stove heat. Electric light. Floor area 1200 square feet.

Building No. 31. South Pump House. One story wood framed. Board and batten exterior, unpainted. Rubberoid roof covering. Dirt floor. No heat. No light. Floor area 400 square feet.

Building No. 32. Necropsy House. One story. Wood framed. Exterior stuccoed on wire lath. Rubberoid roof covering. Plaster walls and ceiling. Cement floor and base. Pine trim, painted. Stove heat. Electric light. Floor area 400 square feet.

Building No. 33. Oil House. One story, Stone masonry superstructure. Wood frame. Shingled roof. No interior finish. Cement floor. No heat. No light. Floor area 170 square feet.

Tent Houses. There are 93 wood framed so-called tent houses for ambulant tubercular patients. All are practically alike. All are one story wood frame. Clapboard exteriors, with canvas screens instead of windows. Rubberoid roof coverings. D & M pine floors and walls. No interior paint or finish. There are generally built on wood posts or stones for piers. Have stove heat. Electric light. Floor area each 190 square feet.

(2) Offices.

Surgeon's Office. Located in building No. 7. Consist of two rooms on the north side of the building facing the parade ground. A toilet adjoins the room on the west side. The rooms are ample in size for office purposes. A desk, chair and table are needed.

Pharmacists Office. Located on north side of building No. 7, and west of Surgeon's Office, and separated by a small hall from the latter. Consists of one large well-lighted room, with closets for stationery and records adjoining. A new typewriter is needed and an adding machine would greatly lighten the clerical work of this large station.

Building No. 10. Dry Room. Two floors. Brick frame. Brick and metal exterior. Single roof. No interior finish. Fair floor. No heat. No light. Floor area 1,000 square feet.

Building No. 11. Storage shed. Six story roof frame. Metal and brick exterior. Unheated. Interior area wood. No interior finish. No floor. No heat. Electric light. Floor area 3,000 square feet.

Building No. 12. Shop and drill house. One story wood frame. Brick exterior walls. Two rooms. Building roofs. Dry floor. Dry and damaged floor. Stoves for dry floor. Building area 2,000 square feet. Electric light. Floor area 2,000 square feet.

Building No. 13. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 14. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 15. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 16. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 17. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 18. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 19. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 20. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 21. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 22. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 23. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 24. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 25. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 26. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 27. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 28. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 29. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 30. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 31. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 32. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 33. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 34. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 35. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 36. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 37. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 38. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 39. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 40. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 41. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 42. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 43. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 44. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 45. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 46. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 47. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 48. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 49. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 50. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 51. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 52. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 53. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 54. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 55. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 56. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 57. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 58. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 59. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 60. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 61. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 62. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 63. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 64. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 65. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 66. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 67. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 68. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 69. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 70. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 71. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 72. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 73. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 74. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 75. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 76. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 77. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 78. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 79. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 80. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 81. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 82. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 83. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 84. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 85. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 86. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 87. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 88. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 89. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 90. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 91. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 92. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 93. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 94. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 95. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 96. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 97. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 98. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 99. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Building No. 100. Shop. Two floor. Two story. Frame. Brick exterior walls. Building roofs. Dry floor. Fair floor. No heat. No light. Floor area 2,000 square feet.

Out-Patient and Clinical Clerk's Office. Located in the extension on the east side in the rear of building No. 7, is a small room used for the treatment of ambulatory cases of tuberculosis, and by the clinical record clerk. It adjoins the dispensary, and is sufficiently furnished.

Expert Farmers Office. Consists of one room located in the south end of building No. 12, and formerly used by the architect on duty at the station. It is ample for the purpose, and sufficiently equipped.

(3) Visitors' Reception Room.

No special room for this purpose, as visitors to patients at the Sanatorium are not numerous. When necessary, the outer room of the Surgeon's Office is used for this purpose.

(4) Examining Rooms.

One room in the east end of building No. 7, is used for the examination of tubercular and other cases.

Nose and Throat Examining Room. A special room used for this purpose adjoins the general examining room, between it and the laboratory in the same building.

Both of these rooms are fitted with special apparatus used in clinical work, but have no X-Ray equipment, which is urgently needed for deep work in pulmonary affections.

(5) Kitchens and Diet Kitchens.

The main kitchen is located in building No. 6, on the east side of the parade ground. It is a large room, well furnished with ranges, soup kettles, warming table, etc. It is used for the preparation of food for the ambulatory patients and the attendants. The equipment is fair, but a new steam dish dryer, a bread slicer, a cake mixer, and a new serving and meat carving table, two dish trucks, and a new dish washing machine are needed.

Hospital Kitchen. Located in the rear of the hospital (Building No. 10) is used for the preparation of food for the patients in the two hospitals (buildings Nos. 10 and 11). Electric warming tables are needed, otherwise the equipment is sufficient. New cement floor is needed in coffee urn room.

Hospital diet kitchen. A small room at the rear of hospital building No. 10 is used for the preparation of special diets for bedridden patients. The room is in bad repair, and not very well furnished, but is the only space available for this work.

Kitchen, Officers' Mess. This is a small room at the rear of Building No. 4, (officers and clerks quarters), and is used to prepare food for what is called the officers' mess, composed of the non-commissioned officers, clerks, etc. (exclusive of the Pharmacist) and the officers who are patients from other services. The equipment is sufficient for present needs.

(6) Pantry and Food Storage.

Air-Pressure and Flooded Chest's Utility. Included in the estimate, as the first aid in the form of building 56, C, is a small room for the treatment of substantive cases of tuberculosis, and for the clinical use, also. It relieves the dispensary, and is relatively isolated.

Surgery Dressing Utility. Obviously if one room needed is for only all of building 56, it, not immediately used by the attendant as only in the station. It is again for the prepared, and sufficiently equipped.

(f) Medicine' Instruction Room.

We spread room for this purpose, as visitors to patients of the dormitories and our dispensary. Thus medicine, the outer room of the surgeon's office is used for this purpose.

(g) Sun-Bathe Room.

One room is the most one of building 56, F, is used for the examination of tuberculosis and other diseases.

Sun and Thermal Treatment Room. A special room used for this purpose is the Lenox Associate Room, between 1) and the laboratory in the same building.

This at times round only (final) are special apparatus used in clinical work, but does no 3-foot diphtheria, which is supposed handled by long work in laboratory activities.

(h) Kitchen and Lunch Kitchen.

The main kitchen is located in building 56, I, as the usual size of the above ground. In a large room, well furnished with range, sink, pantry, table. It is used for the preparation of food for the laboratory patients and the attendants. The equipment is fair, but a good deal dirty, a broad utility, a side sight, and a new serving and meat serving tables, the fish trough, and a new dish washing machine are needed.

Dietetic Kitchen. Included in the case of the dietetic (building 56,) is used for preparation of food for the patients in the day hospital (building 56, of the 1). Provide washing utensils for dietetic, provides the equipment is sufficient. The amount food is varied, is quite good.

Employed diet kitchen. A small room of the case of dietetic training is used for the preparation of special diets for dangerous patients. Room is the best equip, and very well furnished, but is the only space available for this need.

Kitchen, Patients' Dose. This is a small room in the rear of building 56, G. Patients for diets specially, and is used to provide food for diet patients for ultimate dose, designed of the non-contagious patients, etc. Functions of the Dietetic, and the patients who are [illegible] other patients. The equipment is satisfactory for a dietetic room.

Butcher and Meat Storage.

There is one large room for this purpose adjoining the main kitchen (in Building No. 6). One small room for similar use adjoining the hospital kitchen (in building No. 10) and one between the kitchen and dining room in the officers' mess (in building No. 10). These rooms are adequate for the purpose. The pantry in the officers' mess needs repairs to the ceiling.

Food Storage. One large subsistence storeroom adjoins the main kitchen, and a small room used for this purpose is placed next to the kitchen in the officers' building No. 4. Metal bins and drawers (mouse proof) are needed for the main kitchen storeroom.

Vegetable Store Room. One large room with cellar, and directly in the rear of the kitchen, is utilized for this purpose. It is sufficient for present needs.

Cold Storage Rooms. One small room in the rear of the vegetable room and two in the rear of Building No. 5, operated by the refrigerating plant, are used for this purpose. The one near the kitchen is used for storage of meats, etc., in daily use, and the two in the rear of the Power and Laundry building for the storage of supplies at longer intervals.

(7) Store Rooms.

A store room for general purposes, medicines, hospital supplies and unserviceable property occupies the greater part of Building No. 12 on the west side of the parade ground. Construction, stone walls with shingle roof.

A general storeroom for agricultural and station supplies is located in a separate building on the east side of the reservation to the west of the corral. Construction, frame, paper roof, one story. An old building in the northeast part of the reservation and near the bank of the Bonito is also used for the storage of some agricultural machinery and vehicles, but is in bad condition, and beyond repair. A new building is urgently needed.

A small medical store room is located next to the dispensary in Building No. 7, and a small one-story adobe building in rear of the surgeon's quarters is used for plumbing supplies. Stationery supplies and records are stored in two closets adjoining the Pharmacists office, clinical charts in the hall in rear of Surgeon's office, and clinical histories in the Outpatient office. There is also a room in the middle part of the first floor of Building No. 9, which is used for the storage of blankets, linen, and drugs. It is suitable for the purpose. A small room for the storage of electrical supplies adjoins the laboratory.

(8) Quarters for Officers.

Surgeon in Charge. Located in Building No. 1, on the northeast corner of the parade ground. Construction, two story and attic, adobe building, stuccoed, shingle roof, and an extension of one story in the rear. Colonial porch in front. On the first floor are the following rooms. Entrance hall, parlor, library, bedroom, general room, dining room, pantry, kitchen, and bathroom. On the second story are four bedrooms, and two small rooms used for storage purposes. These are very comfortable and spacious quarters, and

There is but large room for 1000 students or another the main building. This building has the small room adjacent one adjacent the lecture-hall attached to the building No. 111 and one building for Physics and Physics room for the officers' mess (in building No. 114). These rooms are separate for the officers. The layout in the military mess shall require be the table.

Post Dormitory. The large dormitories attached to the main building, but a small room have for this purpose is placed only in the kitchen the officers' building No. 6. Total 1000 and 1000 (whom small are needed for the main kitchen activities.

Temporary dining room. The large room will allow, and shortly is the room at the kitchen, is utilized for this purpose. It is additional for present needs.

Cold storage room. The small room in the rear of the temporary room and in the rear of building No. 6, adjacent to the refrigerating plant, are used for this purpose. The one meet the kitchen is used for storage of meat, etc., in daily use, and the one in the rear of the three are needed for the storage of supplies of larger volumes.

(1) Extra Rooms.

A store room for general purposes, machinery, repairs, supplies and necessaries properly occupies the principal part of building No. 14 on the west side of the parade ground. Constructed, where will have parade ground.

A special storeroom for agricultural and auxiliary supplies is provided in building on the east side of the temporary. In the west of the ground. Construction, room room, one story. In the building is the laboratory size of the building. Building for the storage of some agricultural machinery and implements, and in the and conditions, and larger rooms. A new building is actually needed.

A small workshop room is located here in the storeroom in Building No. 7, and is small workshop which nothing to work of the department building is room, for electric machines. Furthermore supplies and tools for the storage in the storeroom adjoining the workshop office, electric machine the hall is part of Department's office, and electrical laboratory in the building office. There is also a room in the main part of the front. Lower of building No. 6, which is used for the repairs of electric lamps. Lamp room. It is outside the parade. A small room for the electrical repairs adjoins the laboratory.

(2) Quarters for Officers.

Officers in Charge. Number in building No. 1, at the northwest corner of the parade ground. Construction, the upper one with kitchen, dining room, attic room, and is storeroom at one story in the rear. Material is brick. On the first floor are the kitchen room. Dimensions 50'x 40'. Cellar, laundry, bathroom, washing room, toilet room, pantry, lavatory, lamp room. On the second story are four bedrooms, one for small room and bathroom lavatory. There are very comfortable and spacious quarters, and

except for some minor articles are adequately furnished. Servants' rooms for these quarters are located in a small one-story adobe building in the rear of No. 1. Minor exterior repairs to stucco is needed.

Junior Medical Officers' Quarters. (Passed Assistant Surgeon) Located in building No. 2 on north side of parade ground, and east of Surgeon's quarters. One-story adobe building, with shingle roof. It has the following rooms: Sitting room, four bedrooms, two toilets, one bathroom, small hall, dining room and kitchen. These quarters are in good condition, and sufficiently furnished. A bedstead is needed to replace one worn out . A servant's room is located in a small one-story adobe building in the rear.

Junior Medical Officers Quarters. (Assistant Surgeon) (in building No. 13) Located in the north compartment of Building No. 13, on the north of the parade ground. Construction, stone, and adobe building, shingle roof. It has three bedrooms, one sitting room, one dining room, one kitchen, and a servant's room in a small adobe one-story building at the rear of the kitchen. These quarters are comfortably furnished, and only minor articles are needed.

Pharmacist's Quarters. Located in Building No. 3, on the north side of the parade ground, and next to the Junior Medical Officer's quarters in Building No. 2. Construction, adobe walls, stuccoed, shingle roof, one story and attic. There is a double set of quarters in this building divided by a central partition, with porches in front and separate entrances in the front and rear. Each set of quarters contains the following rooms: Large hall, sitting room, two bedrooms, dining room, kitchen, pantry and bathroom. They are sufficiently furnished, and only minor articles are needed. There are no servants' rooms attached to these quarters and it is considered that these could be provided by using part of the building in which the plumbing supplies are now stored.

Only one set of quarters is occupied at the present time as there is only one Pharmacist on duty at the station.

Acting Assistant Surgeon's Quarters. The three Acting Assistant Surgeons on duty here are quartered in the tent houses for officers located on the northeast corner of the parade ground. These quarters are chosen for the reason that these officers on duty here are all affected with tuberculosis. They are furnished in the usual simple manner of tent houses.

Quarters for other Officers.

Expert Farmer. Located in the middle compartment of Building No. 13. Construction, stone and adobe, shingle roof, two stories. Contains the following rooms: Three bedrooms, one sitting room, dining room, kitchen, toilet, and servant's room. Furniture adequate.

Hydrographer and Trained Female Nurses. Located in the next compartment in Building No. 13 to expert farmer's quarters. The Hydrographer has one room and bathroom, and the two nurses, located on the upper floor, have three rooms and a bath. The dining room and kitchen in these quarters are not used, the nurses taking their meals in a small room in building No. 6, (main kitchen and dining room) and the Hydrographer at the officer's mess. Furniture adequate.

Chaplain and Property Clerk. Located in the south compartment of Building No. 13. The Chaplain has two rooms and a bath on the upper floor, and

the Property Clerk two rooms and a bath on the first floor. The dining room and kitchen in these quarters are not used, as the occupants of the rest of the rooms, eat at the officers' mess. Furniture sufficient.

Officers and Clerks Quarters. Located in Building No. 4 on east side of parade ground. Construction, stone walls, one story and mansard, shingle roof. Porches on west side. Bed shelters on upper story on east side. This building has on the first floor, four halls, eight large rooms, four smaller rooms, two bathrooms, a music room, clubroom and poolroom, dining room, pantry, kitchen and storeroom. One the second story there are four halls, eight large rooms, and two bathrooms, and at the rear on the east side two bedshelters extended from the main building for outdoor sleeping. Three stenographers, one electrician, one assistant clerk, one mail clerk, one filing clerk, one laboratory assistant, one janitor of Building No. 9, one clinical clerk, and one clerk to expert farmer, have one room each in this building. Eleven of the thirteen large bedrooms are occupied, and four of the smaller bedrooms are unused.

Tent House Quarters. In the tent houses on the north side of the parade ground and between Buildings 3 and 4 reserved for officers, there are three acting assistant surgeons, one librarian and one revenue cutter officer. They are furnished in the usual manner. All quartered in these tents are tubercular, and mess at the officers' mess. There is a toilet for each tent house.

(9) Attendants Quarters.

Married Attendants Quarters.

Engineer. Located in a one-story adobe stuccoed house, on southwest corner of occupied part of reservation. It has six rooms, and is largely furnished by himself.

Other married attendants. Located in four houses to the southeast of the kitchen and dining room building. No. 17, 18, 19, and 20. Construction, adobe and paper roofs. In No. 17 the carpenter is lodged, and has six rooms. In No. 18, there are two attendants, with four rooms each. In No. 19 there are two attendants, with four rooms each, and in No. 20, two attendants, with three rooms each. These rooms are largely furnished by the occupants, as is the rule here with married attendants. These buildings are very old and will not warrant extensive repairs and should be superceded by one new building to all married attendants if plant is to be continued indefinitely.

Quarters for Single Attendants. Fourteen attendants have quarters in a onestory and attic adobe building, with patent roof No. 16, located west of the tent house village for patients. It is a double house, each compartment having four rooms on the ground floor, and one on the attic floor. There are two halls with separate entrances and two bathrooms. They are poorly furnished and need bureaus, chairs, and wardrobes.

In the north and south extensions at the rear of Building No. 6 (kitchen and dining room) there are eight rooms occupied by sixteen attendants. Two bathrooms are attached to these quarters, and a recreation room in the south extension. They are insufficiently furnished, and need chairs, bureaus and wardrobes.

27

(10) Patients Dining Room.

This room is located in Building No. 6, on the east side of the parade ground, and is used for ambulatory patients, chiefly those living in the tent houses. It is a large room with high metal finished ceiling, and has a seating capacity of about two hundred. A new feature observed in this room is covering the tops of the dining tables with battleship linoleum, which furnishes a cleanly, noiseless and durable covering. It is fairly furnished, but an improved lighting system, movable screens, linoleum for floor and tables, and new ironstone china ware needed.

(11) Officers Dining Room.

Located in Building No. 4 on east side of parade ground in the east wing. It is a long narrow room, used by patient officers and other officers lodging in the same building. Its equipment is fair, but new dishes and tableware are needed.

Female Nurses Dining Room. Two female nurses have a small dining room in No. 6 Building, and adjoining the main dining room. It does not require anything.

(12) Attendants Dining Room.

Located in south extension of Building No. 6, on east side of parade ground. There is one large room with a capacity for about thirty people and two smaller rooms. One of the small rooms is used by the cooks, and the other by the female nurses. The large room needs linoleum, ironstone china, and table linen. Linen clothing is also needed for the cooks, kitchen attendants and waiters.

(13) Recreation and Smoking Rooms for Patients.

There are no special smoking rooms, ambulatory patients use their tent houses, and are allowed to use the amusement hall in building No. 9, which is open, as a reading room during the day. Hospital patients use the wards between the hours of seven A. M. and Nine P. M. in the absence of proper rooms.

Recreation and Smoking Rooms for Attendants. Attendants have a recreation room in Building No. 6, adjoining their dining room, which is ample for the purpose.

Petty Officers and Clerks. In building No. 4, on the first floor, there are billiard, club and card rooms for their use, furnished and maintained by themselves.

Amusement Hall. This is a large room on the upper story of Building No. 9. It is well lighted and equipped with a stage, chairs, moving picture outfit, electric piano and phonograph. This room is also used during the day as a recreation room for ambulant patients. Two picture shows are given weekly, and other entertainments at various times. Non-sectarian services are also held on Sundays in this room by the Chaplain resident at the station.

The equipment and maintenance is borne by subscriptions from attendants, patients and officers, and the proceeds from the sale of old articles on the station.

Library. This is located in the same building and across the hall from the amusement room. It is a good-sized room, and the books contained in it have for the most part been donated by outside parties. Some periodicals are purchased from the sale of old articles worn out at the station. The library contains 3,000 volumes, on fiction, history and miscellaneous subjects and a few periodicals.

Specialties on the Station.

Baseball Park and Grand Stand. This is located to the west of the occupied part of the reservation, and south of the old Traders' Store. This park is used during the summer months. The grand stand was erected from old material on the station, by station labor, and the expense of maintenance is borne by subscriptions from those resident on the station.

Chapel. This consists of one large room located in the extension at the rear of building No. 11, and is for the use of Roman Catholics among those living on the station. It is plainly but handsomely furnished, the expense of which has been borne by private subscriptions. Services are held in this room by the Chaplain resident on the station.

Tailor Shop. The building used for this purpose is located to the west of the tent-house village. It is an old adobe structure, and not used for other purposes. A tuberculous patient is allowed to occupy it as a tailor shop and he is compensated for his work by those requiring his services.

Store and Barber Shop. These are located in one large room in the west end of the ground floor of Building No. 9. The stock in the store and the barber shop equipment are owned by an attendant, who is allowed to conduct the store for the accommodation of the patients who are far removed from ordinary shopping facilities. 20% of the profits derived from the sale of goods and the operation of the barber shop is turned over to the station for the purchase of underclothing, tobacco, etc., for the patients, and the remainder goes to the attendant operating the store and barber shop.

Post Office. This is located in a small room in the east end of the first floor of Building No. 29. Of the equipment, the safe and shelving belong to the Public Health Service, and the scales and rubber stamps are owned by the Post Office Department. The Postmaster is paid by cancellation.

(14) Disinfecting Facilities.

There is in building No. 5 one Kensington Engine Works steam sterilizer 40 inches by 8 feet open two ends, with Formalin Ammonia attachment, which is ample for all needs. There is also in the same room one Kny Scherer steam sterilizer for sputum cups of 200 cup capacity, which is ample. There is one Kny Scherer dressing, two instrument and water sterilizers located in the hospital building No. 11. These are heated from gasoline burners. The instrument sterilizers are heated over a gasoline range, as very little use for these occurs. It is thought the arrangment is satisfactory for the pres-

The Equipment and Establishment is taken up mainly with [illegible] [illegible] [illegible]

ent, but should be improved later on if demands increase.

(15) Incinerators.

There arethree brick incinerators located conveniently in yards near tent houses, which take care of all infected materials, kitchen garbage is fed to hogs. Other refuse is either burned under boilers, or hauled to dump and there burned. All of which is satisfactory.

Sputum Cups.

Paper containers are burned in brick incinerators near the tent houses, at the rear of the hospitals. Metalsputum cups are sterilized by steam in a special sterilizer before being emptied into the sewers.

(16) Disposal of Soiled Linen.

Soiled linen is removed from the hospital in bags made for that purpose. These are held in the wards on iron framesand the linen dropped into them. From the tent houses and quarters the linen is removed in bundles and in pillow slips. Infected linen other than that from tubercular cases cuts no figure. Mattresses and pillows from deceased and discharged patients are sterilized by steam, and blankets by formaldehyde in vacuum in the steam sterilizer.

(17) Laundry Facilities.

Laundry facilities are housed in building 5, and consist of the following: 3 washers, 1 soap boiler, 3 set tubs (wood), 1 centrifugal dryer, 1 sleeve dryer (gasoline burning), 1 shirt ironer, 1 84" mangle, 1 12 track steam dry room 9' x 13', 1 starch machine, 1 coal burning iron heater, 1 starch boiler. All laundry machinery is the product of American Laundry Machine Company. This machinery is all very old and much of it unsafe and inefficient, particularly the centrifugal dryer is badly worn and in dangerous condition for further use. The starch boiler is broken and out of commission. The mangle is badly worn and should be replaced. All of the washers leak badly. The steam dry room is unlined and very wasteful of steam, and should be relocated in the room and properly lined and connected with galvanized iron plumbing. The hand irons should be replaced with electric heated ones, and two of the washers replaced with larger modern machines. All the machinery is driven from overhead shafting from an electric motor which is satisfactory. The cement flooring in the washing room is badly cracked and should be removed, and guttered to suit rearrangement of machinery in a more economical way as to space occupied. All steam and hot water piping should be covered. The present steam line from boilers is at 95# to 100# pressure through a two inch line and should have a two inch pressure reducing valve, to 30#. The building should be rewhitewashed. The present linen and folding rooms are as satisfactory as space will permit.

(18) Operating and Surgical Dressing Room facilities.

Surgical Operating Room.

This is located in the extension or L at rear of the north end of building No. 11. It consists of one room equipped with operating and

instrument tables, instrument cabinet, and immersion and solution bowls. It is not well suited for operating purposes, but is sufficient for the small demands of the station.

Surgical Dressing Room.

Adjoins the operating room in the same extension of building No. 11. In it are located the sterilizers for instruments and dressings, the sink for washup purposes, table, etc. It is sufficient for the needs of the station.

Adjoining the surgical operating room is a small ward, now used by tubercular cases, which could be utilized for post operative cases, should necessity therefor arise.

(19) X-Ray Facilities.

None on Station. A new and standard equipment should be supplied as its use is demanded in the diagnosis of pulmonary and bone tuberculosis.

(20) Laboratory.

This consists of one large room, L shaped, located in building No. 9, and directly adjoining the outer room of the Surgeon's office. The room is well lighted and has a good equipment, which is sufficient for the need of the station. A new thermostat is needed for the incubator, or a new incubator may be necessary.

(21) Dispensary.

This consists of two rooms located in the extension at the rear of the east end of Building No. 7. One room adjoining the examining room is used for medical stores, and the other for dispensary purposes. They are adequate for present needs.

(22) Wards for Seamen.

Patients are accommodated in two ward buildings, and in 88 tent houses (total 93) 74 type A, 19 type B. One of the ward buildings (No. 10) is designated as Infirmary A. There are two large wards in the building, the largest main ward being used for infirmary cases, and the smaller as a receiving ward. In addition, there is a small room which is used for cases requiring restraint.

Building No. 11, is designated as Infirmary B, and is used as an overflow from Infirmary A, and also for ambulant cases which cannot be accommodated in the tent houses. The building contains one large main ward, and a smaller ward, at present used for noisy patients. This latter ward adjoing the operating room, and wasoriginally designed for surgical cases, but is not needed for that purpose. The tent houses are utilized for ambulant cases, and are of two types, A and B, each about 14' x 14', with a capacity of two patients. Eighty-eight of these houses are utilized for seamen, four for acting assistant surgeons, and one for a Revenue Cutter officer, the latter five persons each having a house to himself.

Type B house has a leanto roof, with 6' x 3' closet in the rear, and an unroofed porch in front, sliding windows of cloth around the sides, and was the first type of tent house erected at the station.

Type A is modeled after the canvas tent, has a peaked A roof, and two small cupboards but no porch or closet, and has canvas curtains at the sides. Type B is more elaborate than type A, and costs for material approximately $175.00, as compared with $100.00 for type A. Both types were erected by station labor. Type A is cooler in summer, and is generally as well liked as type B. Both tent houses have given excellent results, and provide an inexpensive and satisfactory means of wintering ambulant cases. All tent houses are heated by wood stoves, and are cared for by the inmates.

The buildings used for ward purposes are old renovated Army buildings, are dark and gloomy, and ill-suited for use as wards. They cannot be successfully adapted to modern sanitarium requirements.

(23) Quiet Wards.

There are no rooms designated as such. A small room in wing of Infirmary A is used for restraint cases. The main wards are provided with movable partitions about 6 feet high, which are used to screen off parts of the wards.

(24) Wards for Revenue Cutter Officers.

There are no separate rooms in the Infirmary buildings for this purpose. At present one officer is quartered in a tent house, and others can be accommodated in like manner.

(25) Toilet Facilities.

The toilet facilities in the quarters, for officers and attendants, are satisfactory generally, as are those in the office building. Those in the hospital and infirmary consist of the following classes of equipment. Hospital and all attendants' quarters are equipped with enameled iron gang lavatories, enameled iron bathtubs, some of which have showers over them, vitreous closets, Enameled iron slop sinks are supplied where needed, The toilet rooms have plain D & M flooring, and much of it is old and patched from having been renewed from time to time. Liberal allowance of new flooring should be made to be placed as needed by station force. The station plumber is capable, and keeps the toilet equipment in good general repair, under existing conditions. No general modernizing of toilet facilities is recommended.

(26) Portable tubs.

There is one old tub, worn out and unserviceable. A new one, with rack is needed for the treatment of special cases.

(27) Padded Cells.

There are no special rooms for this purpose. One small room at the rear of Hospital Building No. 10 is used for the confinement of violent insane cases. It has bars on the windows, but the latter and the walls are unprotected. There is an old Human Restraint apparatus on hand, consisting of

wristlets, anklets, etc., but no restraint sheet. Insane cases are removed to St. Elizabeths (Government Insane Asylum) at Washington, D. C., accompanied by suitable escort.

(28) Mortuary Facilities.

Are housed in a new building, having cement floor and wainscot. Plastered walls and ceilings, and is equipped with dissecting table, one enameled iron sink or home made pipe frame, and is piped for hot and cold water but there are no means for securing hot water. A coal burning hot water heater and tank should be supplied. Facilities otherwise ample and satisfactory.

(29) Isolation Facilities.

The tent houses provide ample isolation facilities and are satisfactory.

(30) See Paragraph 2.

(31) Floor Space. The net floor space of the various buildings is as follows:

Officers Quarters, Buildings Nos. 1, 2, 3, and 13	19213	square	feet
Clerks quarters, Building No. 4.	7061	"	"
Attendants quarters, Buildings Nos. 15, 16, 17, 18, 19, 20, and part of #6.	11252	"	"
Infirmaries, Buildings, 10 and 11 and tent shelter at #10.	12626	"	"
Patients kitchen and dining hall, building #5.	8913	"	"
Offices, dispensary, dead house, general storehouses and recreation buildings 7, 9, 12 & 32.	11292	"	"
Power Plant, laundry and shops, Buildings, 5,8,14 & 30.	10661	"	"
Tent houses,	17700	"	"
Farm Buildings, etc., Nos. 21,22,25,26,28,29,&31 Oil house,	12560	"	"
Total net floor space.	111278	"	"

The corral enclosure is not included.

Of the total net floor space there is devoted to

hospital uses,	73752	square feet	= 66%
to quarters.	37526	" "	= 34%
	111278	" "	=100%

(32) Bed Capacity and Space allowed.

The present bed capacity of the hospital is as follows:

	Normal	Maximum
Infirmary A (Building 10) Receiving Ward	8	11
" " Main "	28	35
" " Restraint "	1	1
" " Tent bed shelter (outside of Bldg.)	4	7
" (Building 11) Main Ward,	28	35
" " Noisy "	4	4
Tent Houses 88 for seamen.	176	176
" " 1 for Revenue Cutter Officers,	1	1
Total	250	265

Building #11 is used as an overflow from Infirmary A and for ambulant cases which cannot be accommodated in the tent houses. The capacity for ambulant cases can readily be increased by constructing more tent houses. The total normal capacity of the hospital under present conditions as indicated above is 250 patients of all classes, maximum 265. In general each patient has 110 square feet of floor area and in the ward buildings 1500 cubic feet of air space. As windows are kept open the air space is practically unlimited.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914; and also for the period from July 1st to December 31st for the calendar years 1913, and 1914.

	Fiscal Years.			July 1 to Dec. 31st.	
	1909	1913	1914	1913	1914
Number days hospital relief furnished.	82326	65999	67760	31900	39707
Daily average hospital patients	225	179	185		
Total daily cost per hospital patient.		$1.90	$1.77		
Number of Hospital patients.	399	314	328		

On March 1st, 1915, there were 226 patients of whom 5 were colored. Of the 226 patients, 167 were classed as ambulant cases and 59 infirmary cases. There was one Revenue Cutter Officer. From the records available the maximum daily number in the hospital during the past 10 years was 260 to 270 in 1909, minimum 144 in July 1913. For the past four and a half years the maximum was233 in January 1915, minimum 144 in July 1913. The number of days hospital relief furnished in 1914 was 2% greater than in 1913, and 18% less than in 1909. For the first half of the fiscal year 1915, the relief furnished was 24% greater than for the same period of last year.

(34) Ambulance Service.

The station is equipped with a two-horse ambulance and several wagons and provides its own service. Facilities are adequate.

(35) Heating, Power Plant and Ventilation.

The heating and Power plant is located in Building No. 5, and consists of the following machinery: Two Kingsford 125 horsepower Scotch marine type boilers, with necessary auxilliary. Boiler feed pumps, heaters, separators, traps and piping. One 50 horsepower "Ideal Automatic" slide valve engine, direct connected to a 35 KW 115 volt direct current generator, made by the Northern Electric Company. One 50 horsepower Skinner Automatic balanced slide valve engine, direct connected to a 40 KW 115 volt direct current generator, also made by the Northern Electric Company. 15 KW 600 volt generator, with the necessary complement of switch boards and instruments. The 110 volts units supply power for lighting systems and to motors located at nearby points for ice plant, laundry, carpenter shop, etc. and the 600 volt

units supply current for motors located at the south pump house and the feed grinders in the dairy barn, which are a long distance from the power plant. Full details of these are shown in the accompanying table.

ELECTRIC MOTORS.

Make	Location.	Condition of Generator	RPM	Volts	Amp.	KW	HP
Northern Elec. Co.	D. C. to No. 5 Ideal Engine.	Good.	300	115	280	35	
" " "	D. C. to No. 5. Skinner Engine. Motor to generator	"	300	115	363	40	
" " "	No. 5.	Poor	950	115	264		35
" " "	No. 5.	Good	850	600		15	
General Elec. Co.	Belted to No. 5. Amo. Comp.	"	925	115	112	15	
Standard Elec. Co.	#5, tool grind	"	1000	115			1/3
General " "	#5, Laundry	"	725	115			10
" " "	#6, Kitchen	"	1200	115			1¾
Standard " "	#6, Kitchen	"	1000	115			1/6
Emerson " "	#6, Dishwasher.	"	1200	115			1.3
General " "	#6, Breadmixer,	"	1900	115			2.5
" " "	#8, Carpenter shop.	"	1650	115			5
Standard " "	Plumber shop tool grinder,	"	3000	115			1/8
General " "	#23, North Pump,	"	600	115	75		10
Westinghouse E. "	#31, South Pump,	"	1100	550	30.4		20
General Elec. "	#27, Feed Grinder,	"	1500	550	15.5		6

The arrangement of the various units of the power plant is very unsatisfactory for economical production; the engine room is very badly crowded and the piping system should be laid out anew and in accordance with modern practice, and provide ample headers for steam lines. Expansion loops and necessary equipment to prevent the present heavy losses by condensation.

The water supplied tot the boilers is heavily charged with hard scale forming matter as indicated by the following analysis:

Water Analysis. By G. R. Patten, Youngstown, Ohio.
September 16th, 1912.

Grains per gallon.			Grains.
Chlorine	3.4	Permanent hardness	14.0

Treatment Recommended.

Alkalinity	14.0	Lime 90% 2 pounds Soda ash 58% 1.8 lbs.	per 1000 gallons.
Sulfuric acid	7.2	Caustic Soda 74%	15 lbs. per 1000 gallons.
Solids by evaporation.	40.0		
Calcium oxide	7.0		
Magnesia oxide	2.2		

Note. The only difficulty I can see is that the chlorine is a little high, but there should be no trouble in producing water thatis free from scale.

It has given so much trouble that a Cookson Feed water heater with a purifying attachment wasinstalled but is not being used as intended. The engineer has invented and placed on it a motor driven attachment for blowing flake graphite into the feed water, which does not soften the water, or cause any less scale, which is the prime cause of loss in evaporating power of boilers. It does however, make the removal of scale easier by causing a thin coating of graphite between the boiler tubes and the scale. The intention of the water purifier has been defeated however and no economy results from the investment. It is recommended that a copy of the water analysis be sent to the Dearborn Drug and Chemical Co., Chicago, and a certified softening compound supplied and fed through the heater as originally intended.

It is also stated that the cylinders of both engines have worn out of round to such an extent as to leak steam badly, and they should be rebored, and overhauled generally.

The 600 volt generator is one of the very old type of this manufacture and gives constant trouble through breakdowns, and as repair parts are no longer kept in stock and are unusually expensive both as to cost and in delays in their supply it would be wise to have it sent to the factory and modernized or a new generator supplied in its place. The exhaust steam from the engines is used in cold weather to heat such of the buildings as have steam radiation and is equipped with a Warren Webster vacuum system for the returns. The efficiency appears to be good, the back pressure on the engines being less than two pounds in zero weather, which prevailed part of the time of our visit, and no live steam is used in the heating system except under unusual conditions of stopping engines for special repairs, etc. There are no special provisions made for ventilating buildings, except through windows and doors, which under local conditions is satisfactory.

The estimated cost of remodeling and repairing the power plant is $2,000.00.

(36) Illumination.

The station is electrically lighted by a 110 volt direct current from a lighting and power plant located in building No. 5, through an overhead wire lighting system, building wiring run in wood mouldings or concealed on spools. The service is good and supplies lights in sufficient quantities for all needed purposes. The present system of lighting certain rooms from series of lamps located at picture moulding height entirely around rooms is extravagant in Watt consumption, and should be changed to drop fixtures with reflectors, which would supply sufficient light with less than half the number of outlets in these rooms. This is particularly true of the patients' dining hall, building #6, and a number of rooms in Officers' quarters. Semi-indirect drop lights should replace present unshaded drops in hospital and infirmary wards, buildings 10 and 11, otherwise the system seems to be satisfactory under the present conditions.

(37) Decoration.

There is no definite scheme of decoration at the station, but the buildings are tastefully decorated, either with paint and wall paper combinations, or all paint, the colors being selected probably by the officer in command or by the individual tastes of the users of the quarters. The hospital buildings are neatly painted, but as all the buildings are very old and need

constant repairs, they should be repainted by the station force from time to time as may be deemed necessary. All buildings requiring exterior painting are well and tastefully painted.

(38) Telephone and Call System.

There is one government owned line between the station and Capitan, N. Mex., six miles connecting there with Bell System. There isone instrument in Building No. 7, but instruments on intercommunicating line about station can be switched onto this line. There is a party line intercommunicating system about the station with 19 phones all on one line, magneto call, in good condition but material is on hand for its reconstruction. The work will be undertaken by station labor. There are minor push button calls in several buildings.

(39) Ice and Refrigeration.

There is located in the rear of building #5 an ice and refrigerating plant consisting of a York ammonia compressor, beltedriven from a General Electric Motor, steam driven brine pumps, and the usual system of piping condensers, etc., for the proper operation of the plant, which has a capacity of thirty-six 200 pound cans for ice, and coils for cold storage rooms, for meats, milk, vegetables, etc. The machinery is located in rooms where dust and dirt blow in from all directions. The room available is not satisfactory, and should be ceiled up, and cement floors laid with proper drain and the plant made possible of being kept clean. There is an old condemned steam driven ammonia compressor on the foundations in the middle of the machinery room, which should be removed to the scrap heap, as it has no value whatever in this locality and the space is valuable for other uses. Sufficient ice is made daily to supply all needs of the station. Ice boxes and refrigerators are judiciously placed where actually needed. With the improvements outlined above the plant would be satisfactory, and is ample for all prospective needs.

(40) Water System and Fire Protection.

The supply of water which is dependent on the flow of the Bonito River has in recent years been entirely inadequate for irrigation and insufficient, with the present storage capacity, for domestic purposes. The shortage is due to the diversion of water from this stream by the El Paso and Southwestern Railroad in 1909 and 1912, and a suit is now pending by the United States against the railroad on this account. It is doubtful even under the best conditions if sufficient water can be obtained to irrigate the amount of land required to furnish farm products for the station.

The present supply of water for range cattle is insufficient but can be readily improved at small cost by constructing at several points over the range shallow driven wells.

The insufficiency of the supply of water for domestic purposes and fire protection can be remedied by providing additional storage capacity and installing new mains and equipment to give adequate fire protection. The improvements which should be carried out are as follows:

A storage reservoir of 1,000,000 gallons by lining with concrete the excavation known as the South Reservoir, easterly from pump house.

One additional surface well at river and one additional pump.

A new system of fire mains and hydrants about the grounds and buildings.

An 8" main from reservoir to power house with booster pump at power house for fire purposes.

The estimated cost is $23,450.00

On March 11, 1915, the Committee submitted a special report on the water situation describing the facilities now available and devising various projects for their improvement. This report is as follows.

REPORT ON IMPROVEMENT OF WATER SUPPLY.

There are three projects which might be developed to provide the station with an adequate supply of water for domestic and fire purposes. They are described as follows:

A. Reservoir on Round Top - Direct Pressure.

Construct a reservoir on Round Top at elevation 275 above parade ground and new fire mains about the grounds utilizing direct reservoir pressure for fire service, and the present system of piping for domestic service by cross connecting to fire main through pressure reducing valve. Inspector Fourchy recommended this project using 6" main from reservoir to parade ground.

B. Additional Reservoir N. Reservoir Site # Direct Pressure and Booster Pump.

Construct an additional reservoir at the site of the present North Reservoir, elevation 106 feet with new main to station direct connected to present piping system for domestic supply and separate mains for fire service, adequate pressure being provided by a motor driven centrifugal booster pump in power house.

C. Utilizing South Reservoir - Direct Pressure and Booster Pump.

Line with concrete the existing South Reservoir, east of South Dump House, elevation 120 feet and connect with new main to present piping system for domestic service with separate mains about the grounds for fire service, adequate pressure being provided by a motor driven centrifugal booster pump in power house. Proposals for relining this reservoir were taken not long ago. Cost about $10,000.00.

Connected with each one of these projects for increasing the storage capacity and improving the fire protection system is the question of increasing the supply of water.

A careful study of each of these projects has been carried out, the sites have been examined and computations made to determine the storage capacity needed, the resulting fire pressure under various conditions and the relative cost for the results obtained.

It is recommended -

First - That the present supply be increased by digging one or two additional surface wells near the one at the North Pump House. Care should be taken to locate by borings sites which will penetrate into a satisfactory gravel stratum.

The present well is in gravel 100 feet from the river bank, 25 feet deep and extending 10 feet below the bed of the stream. The gravel strata is not, however, uniform and care must be taken to prevent the new wells from terminating in a pocket of fine material.

The source of the well supply is seepage from the river and underground flow in the gravels known to underlie the river bed in this locality. The wells should be connected to present pump by common suction and another pump provided for breakdown service.

The only other sources of water supply are two artesian wells, one at North Pump House 185 feet deep, (originally 255) delivering 16 gallons per minute and one at South Pump House, 800 feet deep, delivering 20 gallons per minute. The flow from these wells is too small to make them a factor in providing the station with water and in addition the water is so hard as to make it unfit for use.

Second - That storage capacity be provided for one million gallons of water. It is believed that the needs of the station require a reservoir of this capacity. At present the North Reservoir holding 45,000 gallons is the only storage available. The daily consumption is 30,000 to 60,000 and the storage is therefore, not a days supply. The only practicable source of water is surface wells along the river bottom and at times when the river goes dry, or practically so, the amount available is very limited and has occasionally ceased. The capacity of the present well under good conditions with considerable water flowing in the river is estimated at 60 gallons per minute. Additional wells will increase this capacity and will materially augment the amount available in the dry season.

A million gallon reservoir would provide sufficient water for the station with the economy practiced in a dry season for from 15 to 20 days with a reserve at the end of this time of 250,000 gallons for fire purposes.

It is believed that with the possibility of drought always imminent the station needs water storage for at least 15 days and in addition a fire reserve of 250,000 gallons.

Third - That a new and separate system of piping about the grounds is needed to provide adequate fire protection.

At present the mains are so small 4 inch from the North Reservoir, and 3 inch about the grounds, that with two 3/4" fire streams the pressure in the mains drops from 45 pounds to 10 pounds; the water not much more than falling out of the ends of the nozzles. With one 2½" outlet of any hydrant open the pressure in the power house falls to zero.

The present mains are entirely too small to discharge an adequate amount of water under any pressure and are so old (installed in Army days) that they would not withstand any material increase in pressure.

A new system of piping has been laid out and is shown on sketch attached.

Fourth - That the South Reservoir be lined with concrete to provide a reservoir of 1,000,000 gallons capacity as indicated on sketch of plan attached to this report. This reservoir is to be connected by 8 inch main direct to existing piping system about grounds for domestic service and through booster pump in power house to new fire mains. Booster pump should be able to deliver 800 gallons per minute, raising pressure from 30 lbs. to approximately 100 lbs. This reservoir would be filled from well at north pump house and a 4 inch pipe line from this well to reservoir is now in place.

The project recommended by Inspector Fourchy for a 500,000 gallon reservoir on Round Top, and a 6 inch main to parade ground, using reservoir head for fire pressure, is not believed to be the most desirable project for solving the problem, for the following reasons.

The reservoir recommended is too small and one of a million gallons is required.

All water used by the station must be pumped 155 feet higher than for the south reservoir and then passed through a pressure reducing valve for domestic purposes, increasing the cost of pumping water approximately 100 percent.

The 6 inch pipe line recommended is too small and an 8 inch would be required to give adequate pressure for fire purposes. With 6 inch pipe and 800 gallons per minute, 4 fire streams, 200 feet of hose each, pressure at nozzles would be only 9 lbs. With 600 gallons per minute 4 fire streams pressure would be 59 pounds. With 8 inch pipe line pressure at nozzle would be 60 and 88 pounds respectively.

The site of the proposed reservoir on Round Top is a conglomerate ledge. The top of the hill is narrow and long, 30' x 110' and would involve a large amount of waste excavation to secure area enough for a reservoir. The structure could not be built partly on fill and partly on solid ground, as the sides of the hill are very steep and offer no good holding ground for the excavation material.

The place is inaccessable by a roadway and all material would have to be hauled up by cableway or other power. It is certain that the construction of such a reservoir would be exceedingly expensive, approximating fully the $15,000.00 estimated in the inspectors report for both reservoir, pipe line to station and piping system about buildings. As compared with this the construction of the South Reservoir involves only the lining of an excavation already made with concrete. Previous bids on the work approximated $10,000.00 for a reservoir of one million gallons or twice what could be constructed on Round Top for more money.

The having always available a considerable quantity of water at an elevation sufficient to supply adequate pressure for fire purposes without the intervention of pumps, while desirable in certain cases, is not of such paramount importance to outweigh the increased cost of operation and installation. With the South Reservoir project there will always be available by direct pressure approximately 30 pounds at the nozzles with 4 fire streams of 100 gallons each, sufficient for an incipient fire. With the pump located in the power house there should be no difficulty in having it in running by the time the several hose lines are in operation.

DATA RELATING TO FORT STANTON WATER SUPPLY AND VARIOUS PROJECTS, FOR ITS IMPROVEMENT.

(1) Present Storage.

Storage capacity 45,000 gallons in north reservoir on a shoulder of Round Top, elevation 106 feet above parade ground, depth of reservoir, 12 feet built of stone masonry and covered with shingle roof. Two large dirt reservoirs, one to two million gallons, at south pump house, were formerly available for a reserve, being filled by ditch three miles long by gravity flow from river. Easterly one not used since 1908 and westerly one never used. Not sufficient water in river to fill by gravity since that date. Ditch now practically destroyed.

The north reservoir was constructed by the Army probably about 1885.

The south reservoir east of the north pump house and ditch to river was built in 1900 and the westerly reservoir in 1908 and 1909.

(2) Present Wells.

Main source of supply is a surface well on north bank of river westerly from parade ground and 100 feet from bank of river. Depth of well 25 feet, bottom about 10 feet below river bed. Source, seepage from river and underground flow in gravels underlying river bed. Capacity with considerable water flowing in river 60 gallons per minute. During dry season flow is much diminished and during an unusual drouth it has been known to cease altogether for a period of 15 days. The water is hard but satisfactory for use.

The well was dug by the Army in 1885.

There are two artesian wells which were driven with the expectationof augmenting the surface well supply in times of drouth. They are practically a failure and the water is excessively hard and unfit for use. The one along side the north pump house is said to be 185 feet deep, although some records indicate that originally it may have been 265 feet in depth. It was constructed in 1893, The well at south pump house was drilled in 1904 and is 500 feet deep. The capacity of these wells with deep well pumps is 16 and 20 gallons per minute, respectively, Artesian wells, as a source of water supply are a failure.

(3) Present Pumps.

The surface well, north pump house, is provided with a Gould triplex single-acting geared pump, operated by 115 volt motor. The pump is operating on two plungers, to suit capacity of well, 60 gallons per minute. The capacity of pump is 90 gallons per minute with three plungers in operation. The deep well at north pump house has an Ames deep well pump, single cylinder, single acting, capacity 20 gallons per minute, and is operated by the same motor as the pump of surface well.

The deep well at south reservoir has an Ames deep well pump, single cylinder, double acting, capacity 60 gallons per minute, operating at 20 gallons. This pump is operated by 500 volt Westinghouse motor, 30.4 amperes.

(4) Existing Water Mains.

North pump house and well is connected to north reservoir by 4-inch pipe line, a distance of 1550 feet, and to parade ground by 4-inch line, 900 feet long, the tow linen serving as supply main to piping about the buildings; total length to parade ground 2450 feet. A direct line from north reservoir to same point at parade ground would be approximately 1550 feet long.

A 4-inch pipe line also connects the south reservior with the 4-inch line between north pump house and parade ground and was utilized to fill the north reservior from the south reservior when the latter was in use.

The piping around the grounds is used for domestic and fire service and mains are 3-inch. There are 20 fire hydrants, one and two-way. All hydrants and mains, except discharge line from south reservior, were installed in Army days, and are of no value for a new fire system, but are satisfactory for domestic use.

(5) Present Fire protection Equipment.

The station possesses two chemical engines with 100 feet of 3/4-inch hose and sixty chemical fire extinguishers, Underwriter pattern, all in good condition.

There isone wheel hose reel, with 200 feet 2½-inch fire hose on reel and 200 feet additional on platform. There is 150 feet in store room. There are five hose reels with hose connected to mains, as follows:

One in front building No. 9, with 50 feet of 3/4-inch hose;
One in carpenter shop, with 25 feet of 3/4-inch hose;
Two in horse corral, with 75 feet of 1½-inch hose;
One in dairy, with 75 feet of 1½-inch hose.
Six additional reels and 675 feet of 1½-inch hose are in store and about to be installed in other buildings.

There are seven houses or racks (marked "fire house" on plan) which are used for storing fire ladders, axes, bars and lanterns, but no hose, except in one opposite corral, where there is 200 feet of 2½-inch fire hose.

(6) Storage Capacity Required.

An adequate fire service for the station requires the equivalent of the delivery of 800 gallons per minute through four fire streams, and sufficient storage to have at all times in reserve a supply sufficient for a five-hour fire at the above rate.

The storage needed for a severe drouth should represent 15 to 20 days domestic supply for the station. The amount used at present is 50,000 to 60,000 gallons per day, and with the economy that would be practiced in a dry season could safely be taken at the smaller figure.

15 days supply at 50,000 gallons.....	750,000 gallons.
5 hour fire at 800 gallons per minute.....	250,000 "
Total storage.....	1,000,000 "

Such reservoir will therefore furnish a 15-day supply for the station with an adequate fire reserve storage at the end of that time.

(7) Estimated Friction Loss in New Lay-Out Recommended for Fire Mains About Grounds.

(See sketch plan submitted with this report). The sizes of pipe shown on plan should be adhered to. All mains except short connections to hydrants are 6-inch, the latter 4-inch. All hydrants are two-way for 2½-inch fire hose, except three at tent houses, which are 1½-inch.

The following table shows the pressure lost in friction under worst condition, namely; hydrants Nos. 16 and 18, with the streams of varying quantities. Figures are based on two fire hydrants and four fire streams in operation with 200 feet of 2½-inch fire hose to each fire stream:

Gallons discharged per minute.			Pressure lost by Friction in pounds		
Total per hydrant		Fire per stream.	In piping	In hose	Total
800	400	200	22	20	42
600	300	150	12	10	22
400	200	100	6	6	12

(8) Estimated Friction Loss in Discharge Mains Between Station Fire Mains and Reservoirs of the Three Projects Under Consideration and Net Nozzle Pressure Available.

For comparative purposes the friction loss in main discharge line has been computed for each project under varying quantities of flow, as indicated in the following table. The resulting pressure head at point of connection to fire mains also is shown:

PRESSURE LOST IN DISCHARGE MAINS.

Flow in Gallons Per Minute	From South Reservoir				From Reserve on Round Top			
	8-inch Mains		6-inch Mains		8-inch Mains		6-inch Mains	
	Pounds, Loss.	Pressure Result	Loss Pounds.	Result Pressure.	Loss. Pounds.	Result Pressure.	Loss, Pounds.	Result Pressure.
800	20	32	82	30	18	102	69	51
600	12	40	46	6	10	110	39	81
400	6	44	23	29	5	115	20	100

Flow in Gallons Per Minute	8-inch Mains Loss, Pounds.	Result Pressure.	6-inch mains Loss, Pounds.	Result Pressure
800	12	34	46	0
600	7	39	20	26
400	3	43	13	33

The following table shows the resulting nozzle pressure under conditions assumed in preceding paragraph for the Round Top and South Reservoir projects. The initial pressure at power house is taken at 100 and at 60 pounds from booster pump for the south reservoir projects. For the Round Top project, gravity system, the total losses are the combined losses in discharge mains and station fire mains.

Flow in Gallon Per Minute	Proposed Round Top Gravity Project 8-inch Main.	6-inch Main	South Reservoir Project. Pump Pressure 100 pounds.	60 pounds
800	60 pounds	9 pounds	58 "	38 "
600	88 "	39 "	78 "	58 "
400	103 "	73 "	83 "	68 "

The computations show conclusively that a 6-inch discharge main for the Round Top project is too small and that a pump pressure at power house of 100 pounds for the south reservoir project will give pressure at the nozzles equally adequate with that secured by the Round Top project with 8-inch discharge main. With the same discharge pump pressure the resulting pressures for the north reservoir project would of course be the same as for the south reservoir project.

(9) <u>Comparison of South Reservoir Project with North Reservoir Project</u>

Both projects contemplate a booster pump at power house to provide adequate fire pressure. The piping system about grounds is the same, and in both cases direct pressure would be used for domestic purposes, cross connecting to existing mains which would be used only for such service.

	South Reservoir	North Reservoir.
Elevation above parade ground.....	120 feet	106 feet
Head on pump suction - flow 800 gallons	32 pounds	34 pounds
" " " " " 600 "	40 "	39 "
" " " " " 400 "	46 "	43 "
Size discharge main from reservoir	8 inches	8 inches
Length, ditto, reservoir to power house.....	3500 feet	2000 feet
Pump discharge North pump house to reservoir.....	4 inches in place.	4 inches in/ place
Length of pump discharge line.....	3600 feet	1550 feet
Total head on pump at 60 gallons per per minute	70 pounds	62 pounds
Total head on pump at 90 gallons per minute.....	76 "	64 "
Elevation water of surface well	30 feet below parade	30 feet below parade

29.

An inspection of the preceding data shows that the results obtained by the two projects are practically identical and their relative value is more a matter of cost and convenience of construction.

The south reservoir project has the advantage that the site is easy of approach, that the reservoir construction will not interfere with the use of the present north reservoir and that the excavation for this project is all ready largely made. There are also more uncertainties in the north reservoir project on account of the unknown quantity of ledge rock to be encountered. An approximate comparative estimate is as follows:

	North Reservoir Project	South Reservoir Project.
Excavating and constructing reservoir with concrete floor and masonry sidewalks.....	$14,000.00	
Lining south reservoir with cement....		$ 9,000.00
3,500 feet 8 inches pipe line reservoir to power house @ $1.70.....		5,950.00
2,000 feet 8 inches pipe line reservoir to power house @ $2.00.....	4,000.00	
Total.....	$18,000.00	$14,950.00

The north reservoir project is seen not to be desirable as it possesses no advantages over the south reservoir project.

(10) Comparison of South Reservoir Project with Project for a Reservoir on Round Top.

Both projects contemplate a new system of fire mains about the grounds which would be identical in both cases.

The present mains would be utilized for domestic supply, the pressure for the Round Top project being controlled by the reducing valves.

Comparative data relative to the two projects are as follows:

		South Reservoir	North Reservoir
Elevation above parade ground.....		120 feet	275 feet
Pressure at fire nozzles, conditions, assumed in paragraph 7, and 100 pounds pump pressure for S.R.project.....	Flow 800 Gal.	58 pounds	60 pounds
	Flow 600 "	78 "	83 "
	Flow 400 "	88 "	103 "
Size discharge main from reservoir		8 inches	8 inches
Length ditto to connection with station system.....		3,500 feet	3,000 feet

	South Reservoir	North Reservoir
[illegible] ground.....	120 feet	275 feet
[illegible]	65 pounds	60 pounds
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	8 inches	8 inches
[illegible]	3,500 feet	3,000 feet

	South Reservoir	North Reservoir
Pump discharge north pump house to reservoir.....	4-inch in place	4-inch branch to main 1,300 feet.
Length pump discharge line.....	3,800 feet	1,900 feet - 8 inches 1,300 feet - 4 inches
Total head on pump at 60 gallons per minute.....	70 pounds	135 pounds
Total head on pump at 90 gallons per minute	76 pounds	137 pounds
Elevation water of surface well	30 feet below parade	30 feet below parade.

The same advantages of easy access and elevation already made are in favor of the south reservoir project as in the case of the north reservoir discussed in the preceding paragraph.

Round Top is much more difficult of access than the north reservoir site and cannot be reached by road so that material must be handled by cableway or other power means.

The narrowness of the top, 20 feet by 120 feet, will necessitate a large amount of waste excavation and the steep side hill slopes and the character of the material prevent constructing the reservoir partly on fill. The indications are that the excavation will be in hard conglomerate sandstone or lime rock.

An approximate comparative estimate is as follows:

	Round Top Project	South Reservoir Project.
Excavating and constructing 1,000,000 gallon reservoir.....	$20,000.00	
Lining south reservoir with concrete.....		$ 9,000.00
3,000 feet 8 inches pressure main, @ $2.20.....	6,600.00	
1,300 feet 4 inches pump line, @ $1.50.....	1,950.00	
3,800 feet 8 inches pressure main, @ $1.70.....		6,950.00
Booster pump and Motor, etc.....		1,000.00
Total.....	$28,550.00	$15,950.00

The theoretical advantage of a direct gravity pressure for fire purposes certainly does not warrant the expenditure of double the amount of money which would be required for the south reservoir project.

(11) Approximate Estimate of the Entire Project Recommended.

The improvements recommended are:
(a) South Reservoir project;
(b) New system of fire mains and hydrants about the grounds;
(c) One additional surface well and pump.

(a) South Reservoir.

Estimate for lining south reservoir in accordance with sketch submitted	$ 9,000.00	
Eight-inch pipe line reservoir to power house 3,500 feet, @ $1.70	5,950.00	
Booster pump and motor in power house	1,000.00	$15,950.00

(b) Fire System About Grounds.

18 two-story hydrants for 2½-inch hose and valves on main	$ 600.00	
5400 feet 6-inch pipe (includes some 4-inch) @ $1.50	8,100.00	
1000 feet 4-inch and 3-inch pipe for connection to 1½-inch hose reels in buildings, @ $0.80	800.00	
6 additional 1½-inch hose reels and hose	500.00	$10,000.00

(c) Additional Surface Well and Pump.

One well	1,000.00	
New pump and changes in sections	500.00	$ 1,500.00
Total		$27,450.00

If funds are not available for the whole project the fire mains about the grounds and the additional surface well can be installed first and the reservoir and pressure main constructed later, or the reservoir alone can be lined and used in connection with the north reservoir for a reserve supply for domestic purposes.

Fire protection can not be materially improved without the construction of the entire project.

ANALYSES OF WATERS FROM FORT STANTON, N. M.

No. 1 ("South Fork at Railroad Intake")
No. 2 ("Eagle Creek at Railroad Intake")
No. 3 ("Main Bonito at Railroad Intake")
No. 4 ("Main Bonito Opposite Pump House on North Bank of Rio Bonito")
No. 5 ("Deep Well, North Bank Rio Bonito, after Pumping Two Hours")
No. 6 ("Shallow Well, North Bank Rio Bonito")
No. 7 ("Well at Reservoir on Hill, South of Fort Stanton, after Pumping Thirty Minutes")

	Number of Sample						
	1 ppm.	2 ppm.	3 ppm.	4 ppm.	5 ppm.	6 ppm.	7 ppm.
Total residue on evaporation	182.0	201.0	325.0	518.0	579.0	560.0	577.0
Calcium (Ca)	17.9	39.2	53.7	93.8	83.4	97.9	98.9
Magnesium (Mg)	5.4	8.2	12.7	19.5	37.8	22.3	23.4
Sodium (Na)	4.1	5.5	9.6	13.9	19.6	15.3	15.7
Bicarbonates	32.8	103.8	129.0	179.9	216.7	187.9	188.5
Sulphates (SO_4)	40.9	51.4	101.2	177.9	188.6	194.0	197.5
Chlorides (Cl)	7.0	9.0	14.0	25.5	36.0	29.0	29.5
Temporary hardness	4.9	68.1	94.2	122.4	158.4	134.3	138.3
Permanent hardness	61.8	69.7	104.4	192.1	211.4	202.0	203.9
Total hardness	66.7	131.8	198.6	314.5	343.8	336.3	342.2

(41) Fire Alarm System.

There are several pull boxes, which give signal in engine room, showing the station from which alarm is send. Alarm is then sounded on power house whistle, indicating by blasts location of fire. Drills are held weekly.

(42) Sewer and Other Drainage.

Sewage is taken care of in vitrified pipes of varying sizes, twelve inches and under, installed for the most part in Army days. Sewage is discharged down stream from the station buildings and beyond corral in sewage ponds, some 500 feet from the river bank and 15 to 20 feet above it. The sewage is discharged on to these areas, and this mixture of sewage and water stands until the water has soaked away. Several of these ponds are used in rotation. The solid matter is cleaned off from time to time as may be required. The results are satisfactory and the ponds require little attention or cleaning. The sewers of the system are in general too large for the amount of fluid handled so that flushing is necessary at times. They are in general, however, in good condition and satisfactory. There is no special provision for taking care of storm water. As a rule it discharges onto the ground and sinks or runs away.

(43) Streets, Roads, Walks, Fences and Grounds.

There are no macadam streets or roads, or in fact any roads of permanent construction. There are numerous dirt roads about the grounds and to various parts of the reservation, some of which have been improved with cinders. During rainy weather the roads are very muddy, but as seasons of bad weather are not usually of long duration, they serve the purpose fairly well, and no general reconstruction is recommended. There is a cement sidewalk about the parade grounds, but nowhere else. Additional cement sidewalks are needed, especially at road crossings and to tent houses. The station has numerous wood post and wire fences over the reservation in general, in good condition. The entire reservation is fenced.

The grounds of Fort Stanton Sanitorium, in immediate relation to the buildings, may be divided into two classes - first, that comprising the parade grounds around which the principal buildings are grouped, and which has the form of a parallelogram, tent house village to the south, and the other structures on the east, north and west sides of the land used for hospital and executive purposes.

The old parade ground has a few patches of coarse grass, but is somewhat neglected and crossed by footpaths in various directions. An attempt was made, at an expense of $500.00, some years ago, to seed and grow blue grass on this ground, which resulted in failure. Some fill is required to level and bring it up to grade, and an attempt to grow Bermuda grass on it should be made. Provision is made in the drainage system to irrigate this ground when water for this purpose is available. There are a few poplar and acacia trees planted about the central court of parade ground which seem to be flourishing. In the center of this ground is the station flagpole. Substantial cement walks, with extensions to the different buildings, are laid entirely around the parade ground, and constitute a pleasing and useful addition. The work was done in 1912 by station labor from material on hand.

The grounds around the tent house village and other structures are of natural soil, and although not objectionable in dry seasons, during wet and snowy weather, walking about the buildings is dirty and disagreeable, and much mud is carried into the different buildings on the feet of those entering therein.

The conditions about the corral, dairy and rear of the dining hall and power buildings are even worse than about the tent houses.

These conditions could be improved by placing cinder paths between and to the different buildings, and using gravel for the same purpose, of which there is an abundance within easy distance.

The location of the buildings receives the drainage from the slope and mesa to the southwest, and subsoil drainage of the area on which the buildings are placed would be a sanitary and satisfactory measure.

(44) Wharves, Etc.

None; no waterfront.

(45) Livestock, Etc.
Farm Implements, Horse Drawn.

Number	Article	Condition
1	Irrigation lister	good.
1	Corn drill (two-horse)	fair.
1	Corn drill (one-horse)	poor.
1	Grain drill (one-horse)	fair.
7	Cultivators	5 fair, two new.
2	Mowing machines	good.
1	Hay press (one-horse)	good but small capacity.
1	Hay tedder	poor

Number	Article	Condition
1	Manure spreader	fair.
1	Pecker (sub-surface)	good.
2	Gang plows	good.
1	Road plow	good.
1	Plow (one-horse)	good.
4	Walking plows	1 bad, 3 fair.
1	Emerson disc plow	fair.
2	Hay rakes	1 fair and one unserviceable.
1	Corn harvester	fair.
2	Wheel scrapers	bad.
7	Drag scrapers	2 new, 2 poor, 3 unserviceable.
1	Georgia scoop stock	good.
1	Ensilage cutter	good.
1	Hay loader	new.
5	Harrows	1 pipe bar new; 1 four-horse acme unserviceable; 1 disc, fair; 1 spring tooth, good; 1 spike tooth, fair.
	(vehicles)	
2	Dump boards	1 unserviceable, 1fair.
1	Top buggy	New.
1	Park wagon	poor.
2	Mountain wagons	fair.
1	Ambulance	fair.
1	Davenport roller bearing wagon	new.
3	Carts	fair.
1	Wagon (one-horse)	fair.
5	Farm wagons	fair.

	(range cattle)
736	Cows.
37	Bulls.
18	Steers (three year old).
199	" (two year old).
139	" (one year old).
184	Heifers (one year old).
274	Calves (1914).

The above range cattle report taken from round-up December 7-14, 1914.

	(dairy herd)
116	Cows.
2	Bulls.
1	Stag.
25	Calves.
144	

1557 range cattle.
1701 total number of cattle.

Number	(horses and mules)
4	Work horses, heavy draught.
4	Horses, medium draught and driving.
7	Horses, medium draught.
1	Horse, general purpose and single driving.
3	Saddle mares.
5	Saddle and breeding mares.
17	Geldings.
3	Mares, breeding only.
8	Horses, unbroken and too young to work.
10	Colts, 1914.
62 total number of horses	
2	Mules, light draught and driving.
2	Mules, light draught.
4 total number of mules.	
	(hogs)
195	Hogs, approximate.
	(fowl)
236	Fowl, approximate.

(46) Personnel.

There are on duty at this station three commissioned officers, one Past Assistant Surgeon in charge, one Past Assistant next in rank, and an Assistant Surgeon, three Acting Assistant Surgeons, one Pharmacist; and in the executive staff, one Superintendent of the farm, one Hydrographer, one Chaplin; and the following classed as attendants:

Office, one stenographer to the Medical Officer in charge, one clerk and electrician, one clinical clerk, one property clerk, one subsistence clerk, one clerk to the Expert Farmer, one stenographer, one mailing clerk, one stenographer.

Mechanical Plant, one Chief Engineer, three Assistant Engineers.

Mechanics, one head carpenter, two assistant carpenters, one painter, one plumber, andone assistant plumber.

Main Kitchen and Dining Room, one head cook, four assistant cooks, one scullion, and six waiters.

Hospital Kitchen and Dining Room, one head cook, one assistant cook, and one waiter.

Hospital and Tent Village, two trained female nurses, one surgical nurse, one ambulant nurse, three orderlies, and one night nurse.

Laundry, one head laundryman, and two assistant laundrymen.

Poultry Yard, one poultryman.

Range, one fence rider and one assistant.

Farm and Dairy, one corralman, one cartman, and fourteen farm hands, one head dairyman, and four assistant dairymen.

For salaries of officers and employees, see statistical sheet appended to this report. The above force is considered sufficient for the conduct of this station. The Medical Officer in charge states that an extra technical assistant, resident on the station, is required at the present time. The salary of the property clerk, who performed in past the duty of a junior pharmacist, should be increased from $60 to $75 per month.

General, one dispensary attendant, three gauge readers, one janitor, one librarian, one night watchman, one ambulance driver, one cartman, and on laboratory assistant.

(47) Records.

The records of the station, which are quite large, are in good order, properly arranged and kept. The clinical records are complete, and are arranged and reported by a special clinical clerk.

(48) Books.

There is a good number of modern medical works in the station library and quite a large number of older works that are somewhat out of date.

(49) Purchase of Supplies.

The most of the subsistence supplies and coal are purchased under yearly contract, obtained in the usual manner. One firm at Capitan, Welch and Titsworth, furnish most of the subsistence. The Mercantile Coal Company furnished bituminous coal, and wood is also furnished under contract, at the low price at $3.75 per cord. Meat and milk are supplied from the station stock. Mutton, ham, bacon, pork, poultry and eggs are purchased under contract. Vegetables, except potatoes, are raised in sufficient quantities on the station during the summer months, and purchased during the winter months. The delivery of all supplies, including wood, is checked by a special clerk. Purchase of three months' accepted proposal or in the open market would have no special advantages at this isolated station.

APPENDIX A.

Sanatorium at Fort Stanton, New Mexico.

Appropriation for Repairs and Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
35	Remodeling power house building	$ 2,000.00
1	Remodeling horse barns	1,500.00 X
5	New cement floor in coffee urn room 1,000 square feet, @ 10¢	100.00
6	Plaster repairs and painting in officers' mess kitchen building No. 6	75.00
8	Repairs to stucco of building No. 1	50.00
17	New cement floors in laundry	300.00
		$4,025.00

X already done 5-1-16.

APPENDIX B.

Sanatorium at Fort Stanton, New Mexico.

Appropriation for Mechanical & Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
35	Remodeling power plant equipment	$ 2,000.00

APPENDIX C.

Sanatorium at Fort Stanton, New Mexico.

New Construction.

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of Report.	ITEMS	Estimated Cost.
1-7	New store house for farm implements	$ 2,500.00
1	New slaughter house	1,500.00
1	New hog pens	1,000.00
1	Married attendants' quarters	10,000.00
1	Blacksmith shop building	800.00
		$15,800.00

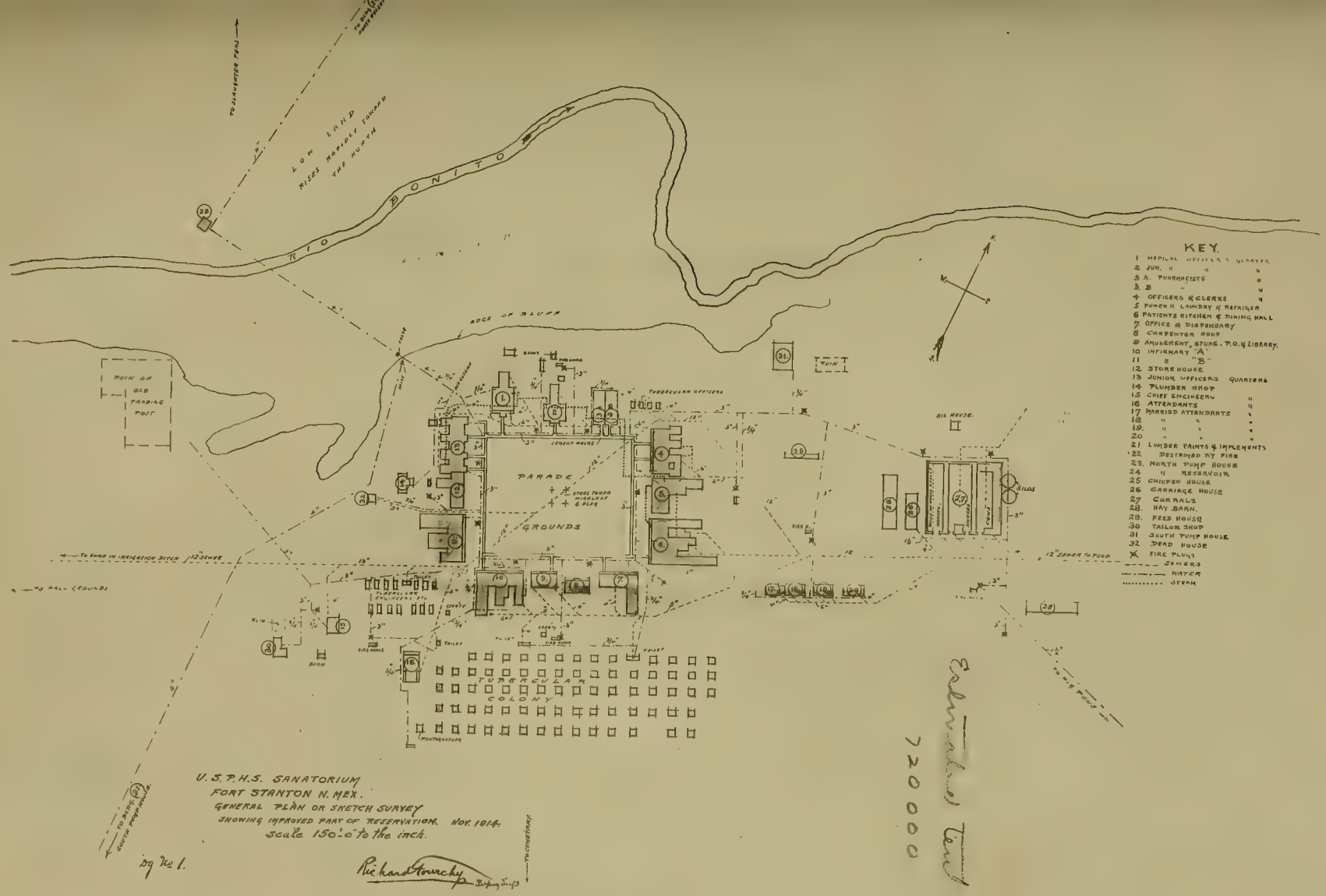
APPENDIX D.

Sanatorium at Fort Stanton, New Mexico.

Administrative Equipment.

ADMINISTRATIVE equipment required.

Paragraph of Report.	ITEMS	Estimated Cost.
2	Offices	$ 355.00
22	Wards	30.00
20	Laboratory	25.00
19	X-Ray equipment	1,200. 00
5	Kitchen and diet Kitchens	675.00
10	Dining rooms	260.00
17	Laundry	730.00
8	Quarters for officers	2,040.00
9	Attendants' quarters	305.00
46	Personal increase in salary of property clerk $25.00 per month	300.00
—	White clothing for cooks, waiters, etc.	150.00
	Total.....	$6,340.00



Estimated Total expenditure 720000

FORT STANTON NEW MEXICO

SURGEON'S RESIDENCE

ASSISTANT SURGEON'S RESIDENCE

PHARMACIST'S QUARTERS

CLERKS' QUARTERS POWER HOUSE LAUNDRY

POWER HOUSE PATIENTS' DINING ROOM

OFFICE CARPENTER SHOP HALL HOSPITAL

HOSPITAL STOREHOUSE JR. OFFICER'S RESIDENCE

PLUMBING SHOP

UNITED STATES SANITORIUM
FORT STANTON, NEW MEXICO

FORT STANTON NEW MEXICO

REAR OF SURGEON'S RESIDENCE

REAR OF ASST. SURGEON'S & PHARMACIST' RESIDENCE

REAR OF CLERKS' QUARTERS

POWER PLANT (SIDE VIEW)

JUNIOR OFFICERS' QUARTERS

JUNIOR OFFICER'S-SERVANTS' QUARTERS

PART OF TENT HOUSE VILLAGE

CORNER OF PARADE GROUND

· VIEWS · OF ·
·U·S·MARINE · HOSPITAL ·

FORT STANTON NEW MEXICO

LOOKING WEST FROM TENT HOUSES

RANGE ATTEN ANTS' QUARTERS

NECROPSY & ENGINEERS' RESIDEN

CHAPEL & TENT HOUSES

WOOD YARD & TENT HOUSES

ENT HOUSE WOOD PILE OFFICE BUI

RED STORES CARRIAGE HOUSE CORR

HAY BARN & CORRAL

·U·S·MARINE·HOSPITAL·

FORT STANTON NEW MEXICO

PARADE GROUND SOUTH-EAST

PARADE GROUND SOUTH-WEST

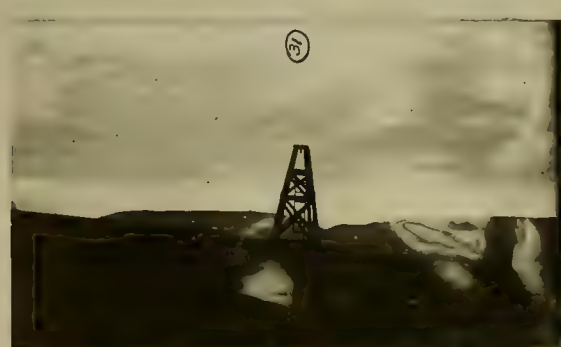
REAR VIEW OF TENT HOUSE

TENT HOUSE & CREMATORY

EAR OF SOCIAL HALL & CARPENTER

GENERAL VIEW FROM FIELDS

GENERAL VIEW FROM CORRALS



SOUTH PUMP HOUSE

VIEWS OF
U·S·MARINE·HOSPITAL·

FORT STANTON NEW MEXICO

HORSE CORRAL

GENERAL VIEW FROM FARM

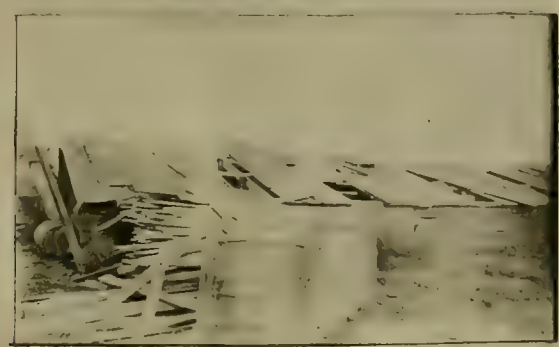
GENERAL VIEW FROM FARM

GENERAL VIEW FROM CATTLE PEN

BEEF CATTLE AT CATTLE PEN

SLAUGHTER HOUSE

HOG HOUSES



HOG HOUSES

FORT STANTON NEW MEXICO

TAILOR SHOP & ENGINEER'S QUARTERS

ATTENDANTS' QUARTERS

MARRIED ATTENDANTS' QUARTERS AND HAY BARN

LUMBER PAINTS AND IMPLEMENTS

NORTH PUMP HOUSE

NORTH RESERVOIR

GENERAL VIEW OF CORRELS, ETC.

28 SHOWING HAY BARN

Birds eye view of Sanitorium taken from North Reservoir
Looking South.

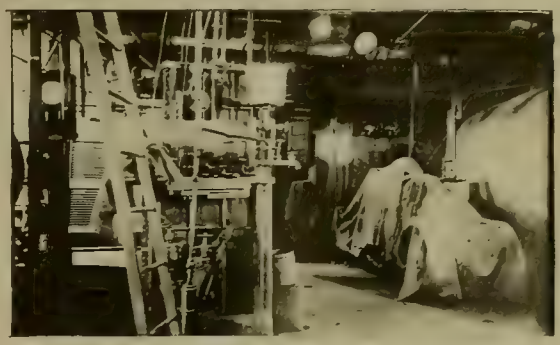
GENERAL VIEW OF SANATORIUM FROM NORTH RESERVOIR

Birds eye view of Sanitorium taken from roof of grand stand, baseball grounds
Looking East.

GENERAL VIEW OF SANITORIUM FROM BASEBALL GROUNDS

FORT STANTON NEW MEXICO

ENGINE ROOM



BOILER ROOM

FEED WATER HEATER BOILER ROOM

BALL GROUND & HILLS

SOUTH RESERVOIR NORTH PUMPHOUSE

TWO EARTH RESERVOIRS (SOUTH)

NORTH RESERVOIR

A PROPOSED RESERVOIR SITE

· VIEWS · OF · U·S·MARINE · HOSPITAL ·

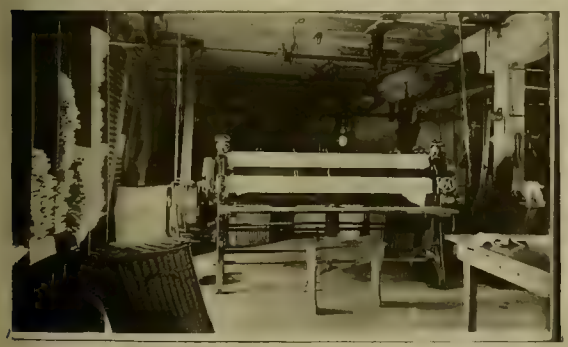
FORT STANTON NEW MEXICO

TENT HOUSE EXTERIOR

TENT HOUSE INTERIOR

CREMATORY

WASHERS IN LAUNDRY



MANGLE ROOM LAUNDRY

GENERAL VIEW OF LAUNDRY

DAMAGED ADOBE BUILDING

CRACKED MASONRY BUILDING

· VIEWS · OF · U·S·MARINE·HOSPITAL·

FORT STANTON NEW MEXICO

GENERAL VIEW IN WARD

HOSPITAL WARD

INSPECTION WARD

HOSPITAL DINING ROOM

HOSPITAL KITCHEN

HOSPITAL TOILET ROOM

DETENTION TENT HOUSE

CHAPEL

VIEWS OF U·S·MARINE HOSPITAL

FORT STANTON NEW MEXICO

GENERAL DINING ROOM FOR PATIEN

ENERAL DINING ROOM FOR PATIENT

IGHTING SCHEME PATIENTS' DININ

COFFEE ROOM SECOND FLOOR

GENERAL KITCHEN

STORE ROOM

STORE ROOM

STORE ROOM UNSERVICEABLE PROP

WAR DEPARTMENT

Office of the Surgeon General

Washington

July 28, 1915.

General Rupert Blue,

Surgeon General, U. S. Public Health Service,

Washington, D. C.

Dear General Blue:

Please find enclosed report of Colonel Bushnell concerning inspection trip of the service tuberculosis hospitals. Will you return it when you have finished with it.

With kindest regards, I remain yours

Very sincerely,

(Signed) W. C. GORGAS

REPORT OF INSPECTION

- of the -

PUBLIC HEALTH SERVICE HOSPITAL
Fort Stanton, New Mexico

- and the -

NAVAL HOSPITAL
Las Animas, Colorado

- by -

COLONEL GEORGE E. BUSHNELL
Medical Corps, U.S.A.

May 6 1915

GENERAL HOSPITAL, FORT BAYARD, N. M.

May 6, 1915.

From: Colonel George E. Bushnell, Medical Corps.

To: The Surgeon General.

Subject: Report of inspection of the Public Health Service Hospital at Fort Stanton, N.M., and the Naval Hospital at Las Animas, Colorado.

In compliance with the provisions of paragraph 8, Special Orders No. 65, War Department, dated March 19, 1915, the undersigned has visited and inspected the hospital of the Public Health Service at Fort Stanton, New Mexico, and the hospital of the Navy Department at Las Animas, Colorado. The dates of the inspections were, Fort Stanton, April 2nd to 4th, 1915; Las Animas, April 6th and 7th.

No special instructions were imparted as to the scope of the inspection. Since the purpose of the inquiry was to ascertain whether an economy could be effected by uniting the government institutions for the treatment of tuberculosis, it was evident that the chief points to be considered were, first, would a saving be made by uniting the institutions?, second, at what place would the greatest saving be thus effected in cost of annual maintenance?, third, how far would the location, present capacity and possibility of easy enlargement of the hospitals as at present operated affect the question as to the choice of the site of the proposed combined institution? Another question, namely: are there considerations other than those relating to cost of operation, which should be given weight in deciding as to the desirability of combining those institutions and as to the locality to be selected for the united hospitals? does not, strictly speaking, belong to an investigation conducted solely with a view to determine in what way economy of pecuniary expenditure can be secured, yet in the writer's judgment might properly be comprised within the scope of his investigations. For of course the main purpose of institutional treatment is to effect an amelioration of the physical condition of thepatients. Economy of expenditures in accomplishing this is undoubtedly eminently proper and desirable, but economy pushed so far as to defeat in any way the attainment of the end sought is false economy.

As for cost of maintenance, the most important points to be determined are, what is the relative cost of railroad fares, of freight transportation, of supplies obtained in the vicinity of the institution, in what way, if any, does the manner of conducting the given institution affect its necessary cost? It seemed unnecessary to inquire into the minute details of cost of maintenance, for the reason that the cost is dependent upon many varying factors, such as the skill in management which must vary with the capabilities of the individuals in charge at the time, local seasonal variations affecting the price of hay, grain and vegetables, and so on. As for salaries, the necessary cost is influenced to some extent by the nature of the institution and the regulations of the department by which it is conducted. And at Fort Bayard at least officers and noncommissioned officers who come as patients are often placed on duty when their condition permits to render such services as they may be able, sometimes less than would be expected of a man of the same grade in full health. The same is believed to obtain as to the other institutions to a greater or less extent. In such cases the end sought is not altogether the execution of the duties imposed, but the testing of the patient as to his bodily condition, the furnishing of occupation, etc. It would then be unfair to assume that the total cost for salaries represented the least possible cost attainable at the institution in question, or that if such cost per capita may happen to exceed that attained elsewhere the fact is necessarily a reflection upon the skill of management or the wisdom of the arrangement of the institution. Furthermore, it is to be considered that it may be true that the cost of salaries, buildings and equipment is greater at one institution for the reason that more service is thereby secured in some directions. As an instance may be cited the fact that at Fort Bayard the cost of salaries, building, equipment and maintenance of the laboratory is much greater than at Fort Stanton and at Las Animas, but on the other hand the laboratory does much pathological work which is not attempted at the other institutions. The same no doubt holds true as to other matters at Fort Stanton and Las Animas.

The task imposed upon the writer was moreover one of considerable delicacy in view of the fact that it was his duty to inquire into the management of institutions which are in some sense rivals of the one which he has the honor to command. It seemed therefore desirable from motives of courtesy to avoid conducting the inspections in what might be regarded as a too inquisitorial manner. For all these reasons all that was attempted was to get a general idea of the situation at each institution visited. Information was obtained ready to hand at one hospital which was not easily obtainable, or at least not obtained, at the other. The result naturally is that this report contains facts as to one institution which are not given with equal fullness as

As for cost of maintenance, the most important points to be determined are, what is the relative cost of railroad fares, of freight transportation, of supplies obtained in the vicinity of the institution, in what way, if any, does the manner of conducting the given institution affect its necessary cost? It seemed unnecessary to inquire into the minute details of cost of maintenance, for the reason that the cost is dependent upon many varying factors, such as the skill in management which must vary with the capabilities of the individuals in charge at the time, local seasonal variations affecting the price of hay, grain and vegetables, and so on. As for salaries, the necessary cost is influenced to some extent by the nature of the institution and the regulations of the department by which it is conducted. And at Fort Bayard at least officers and noncommissioned officers who come as patients are often placed on duty when their condition permits to render such services as they may be able, sometimes less than would be expected of a man of the same grade in full health. The same is believed to obtain as to the other institutions to a greater or less extent. In such cases the end sought is not altogether the execution of the duties imposed, but the testing of the patient as to his bodily condition, the furnishing of occupation, etc. It would then be unfair to assume that the total cost for salaries represented the least possible cost attainable at the institution in question, or that if such cost per capita may happen to exceed that attained elsewhere the fact is necessarily a reflection upon the skill of management or the wisdom of the arrangement of the institution. Furthermore, it is to be considered that it may be true that the cost of salaries, buildings and equipment is greater at one institution for the reason that more service is thereby secured in some directions. As an instance may be cited the fact that at Fort Bayard the cost of salaries, building, equipment and maintenance of the laboratory is much greater than at Fort Stanton and at Las Animas, but on the other hand the laboratory does much pathological work which is not attempted at the other institutions. The same no doubt holds true as to other matters at Fort Stanton and Las Animas.

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respects the other. It is hoped, however, that sufficient and sufficiently accurate information is herein contained to answer the purpose of the inquiry. Where so many facts are gathered in a short time with reference to institutions which are conducted in ways different from those familiar to the writer, it is inevitable that errors will be committed. He can only apologize for them in advance and express the hope that they will be ascribed to misapprehension rather than to an attempt to misstate the facts. He desires to express his appreciation of the kindness and hospitality with which he was received by the commanding officers of Fort Stanton and Las Animas and their staffs.

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TREASURY DEPARTMENT?

Bureau of P.H. and M.H.Service,

June 1904.

Division of Marine Hospitals and Relief.

Memorandum Relating to Fort Stanton,New Mexico.

A reservation for Fort Stanton, embracing about 12 miles square, 144 square miles, was declared by President Buchanan May 12, 1859, according to a survey made by Captain J.N.Macomb, Topographical Engineers, in August and September, 1857, under the orders of Brevet Brigadier General J. Garland , Commanding Military Department of New Mexico. In 1868 a survey was made by order of Major-General George W. Getty, Commanding District of New Mexico, with a view to the reduction of the limits of the reserve, and under authority of the act of Congress of May 21, 1872, 128 square miles were transferred to the Interior Department, and thrown open for settlement under the General Land Laws. A tract embracing 16 square miles, 8 miles in length by 2 miles in width along the Rio Bonito, was retained for military purposes. The boundaries were announced in General Orders No.35, Adjutant General's Office, May 27, 1872. An error in the survey having been discovered, growing out of an erroneous estimate of the magnetic needle, a new survey was made in August, 1876, by Lieutenant H. Walker, 15th Infantry; and the corrected boundaries as defined therein were announced in General Orders No.6, Department of the Missouri, May 19, 1877.

Fort Stanton was established in 1855 to control the Mescalero and White Mountain Apaches. The Post was burned and abandoned in 1861, by the United States forces upon the approach of the Texas troops under General Sibley. In the spring of 1863, after the defeat and withdrawal of the confederates, a garrison of volunteers reoccupied the post, and by covering the old walls with rafters and earth roofs, made the quarters tenantable. In this condition the post was occupied until 1868, when repairs and reconstruction were commenced.

The Reservation was transferred to the Interior Department January 26, 1896, by General Orders No.3, 1896.

August 26, 1896. Department Commander states that abandonment has been completed. Detachment withdrawn and post turned over to Interior Department.

April 1, 1899: Executive order transferring reservation containing 10.240 acres, more or less, with the buildings thereon, for the use of the Marine Hospital Service.

November 1, 1899: Executive order setting aside one mile on the north and one and three-quarters miles on the south, and adding to reservation, making 38 square miles.

Copy: B

DEPARTMENT OF THE INTERIOR

General Land Office,

Washington, D.C., Aug.15,1902.

The Surgeon-General,

Public Health and Marine Hospital Service,

Treasury Department,

Washington, D.C.

Sir:

With your letter of August 4, 1902, you transmitted to this office a copy of a letter dated July 18,1902, from the Medical Officer in command of the Marine Hospital Service at Fort Stanton, New Mexico, with inclosures, relative to the occupancy of a certain tract of land within the limits of the former Fort Stanton Military Reservation, which reservation was set apart for the use of the Marine Hospital Service by the President's Order of April 1, 1899.

You ask that you be informed whether the records show that the particular tract of land in question forms a part of the Government reservation.

The land referred to is technically described as the W.1/2 of the SW. 1/4 of Sec.15, T.9 S., R.15 E., New Mexico, which was entered as a preemption by James A. Tomlinson on August 27, 1885, per cash certificate No. 1023, issued by the

local land office at Las Cruces, New Mexico, upon which a patent was issued by this office on October 9, 1889.

The Fort Stanton Military Reservation was originally created by President Buchanan's order of May 12, 1859, and it was reduced by the Act of Congress approved May 21, 1872 (17 Stats.,139). As so reduced, the reservation covered about one-half of what was afterwards surveyed as the W. 1/2 SW. 1/4 Sec.15, T.9 S., R.15 E., the tract in question, though when the survey of the public land was made, it did not close upon the lines of the reservation, and all the land in Sec. 15 was returned as public land. Notations now appear on both the plat and tract book to the effect that the reservation embraced a portion of the land for which Tomlinson made his entry, but whether such notations were made prior to the date of the entry, it does not appear, nor is it material, except in so far as the absence of any notation would constitute a reason for the action of the office in patenting the claim.

While the entry of Tomlinson should not have been allowed, inasmuch as it was allowed, and in further view of the fact that a patent was issued in 1889, no action can now be taken by the Government looking to the cancellation of the said patent; for the reason that the act of March 3, 1891 (26 Stats. 1093), provided that no suit should be brought to vacate or annul a patent previously issued, after five years from the passage of the act.

The military reservation was turned over to the

Department of the Interior by Executive Order of December 30, 1895, for disposition under the act of July 5, 1884 (23 Stats. 103), but the lands were not disposed of under said act, and they were set apart for the Marine Hospital Service by the President's order of April 1, 1899, as above stated. These orders, however, would not seem to affect the case in any manner; and I am of the opinion that Tomlinson's title to the land entered by him is good against the Government.

Very respectfully,

(signed) W.A.Richards,

Acting Commissioner.

FIG

Copy

DEPARTMENT of the INTERIOR

Washington, November 3, 1899.

The Secretary of the Treasury.

Sir:

In your letter of August 5, 1899, to this Department, you invited my attention to the threatened occupancy, by undesirable persons, of the land adjacent to the Fort Stanton abandoned military reservation, New Mexico; which reservation, with its buildings, was reserved by Executive order of April 1, 1899, for the use of the Marine Hospital Service. You accordingly requested as a preventive measure that a strip of land on the north of the reservation one mile in width and oneon the south one and one quarter miles in width be transferred to the Treasury Department if claim thereto has not already been established.

The matter was given due consideration and it was found that the end desired could be best effected by reserving the sections of unsurveyed lands, and the legal subdivisions of surveyed lands through which the lines you have mentioned pass, and those between such lines and the original limits of the reservation, excepting however, 440 acres north of the reservation, covered by existing entries.

This has been done by executive order of the 1st instant and for your full information I have the honor to inclose here-

with a copy of the order and of the report on the subject by the Commissioner of the General Land Office, dated the 10th ultimo, with the explanatory diagram mentioned therein.

The original order has been today referred to the Commissioner of the General Land Office for noting and filing.

Very respectfully,

(signed) E.A. Hitchcock ,

Secretary.

Jerre with letter from Sec of Int Nov 3-1899.

Copy

B

EXECUTIVE MANSION

November 1st, 1899.

It is hereby ordered that the following described lands in the Territory of New Mexico be, and they are hereby, reserved and set apart for the use of the Marine Hospital Service viz:

T. 9 S., R. 14 E

Section 13. The S. 1/2 of the NE. 1/4, the SE. 1/4 and the SW. 1/4.

Section 14. The SE. 1/4 of the SE. 1/4.

Section 23. The NE. 1/4 of the NW. 1/4, the S. 1/2 of the NW. 1/4, the NE. 1/4, the SE. 1/4 and the SW. 1/4.

Section 24. The NW. 1/4, the W. 1/2 of the NE. 1/4, the NE. 1/4 of the NE. 1/4; lots 1, 2, 3, 4, 5 and 6, and the NW. 1/4 of the SW. fractional 1/4.

Section 26. Lots 1, 2, 3, and 4 and the N.1/2 of the NW. fractional 1/4.

Section 27. Lots 1, 2, 3, and 4. The N.1/2 of the SW. 1/4, the NE. 1/4 and the NW. 1/4.

Section 28. The NE. 1/4 of the NE.1/4, the S. 1/2 of the NE. 1/4, the S.1/2 of the NW. 1/4, the SE.1/4 and the SW. 1/4.

Section 29. The SE. 1/4, the SE. 1/4 of the NE. 1/4 and

the E. 1/2 of the SW. 1/4.

Section 32. The NE. 1/4, the E. 1/2 of the NW. 1/4 and lots 1 and 2.

Section 33. Lots 1, 2, 3, 4 and 5, and the N. 1/2 of the NW. 1/4.

Section 34. Lot 1.

Section 36. Lots 1 and 2.

T. 10 S., R.14 E.

Section 1. Lots 1, 2, 3 and 4, the S. 1/2 of the NE. 1/4, the SE. 1/4 of the NW. 1/4, the SE. 1/4 and the SW. 1/4.

Section 2. Lots 1, 2, 3 and 4, the E. 1/2 of the SE. 1/4, the SW. 1/4 of the SE. 1/4, the SE. 1/4 of the SW. 1/4.

Section 3. Lot 1.

Section 9. Lots 1 and 2, and the E. 1/2 of the SE. 1/4.

Section 10. Lots 1, 2 and 3, the E. 1/2 of the NE. 1/4, the SW. 1/4 of the NE. 1/4, the SE. 1/4 of the NW. 1/4, and the S.1/2 of the section.

All of section 11 and all of section 12.

Section 13. The NW. 1/4 of the NE. 1/4, the N.1/2 of the NW. 1/4, and the SW. 1/4 of the NW. 1/4.

Section 14. The NE. 1/4, the NW. 1/4, the NW. 1/4 of the SE. 1/4, the N.1/2 of the SW. 1/4 and the SW. 1/4 of the SW. 1/4.

Section 15. The NE.1/4, the NW. 1/4, the SE. 1/4, the N. 1/2 of the SW. 1/4 and the SE. 1/4 of the SW. 1/4.

Section 16. The NE. 1/4 of the NE. 1/4.

Section 22. The NW.1/4 of the NE. 1/4 and the NE. 1/4 of the N.W.1/4.

T. 9 S ., R. 15 E.

What would be, if surveyed, sections 7, 8 and 9, and fractional sections 16, 17, 18, 19 and 22, section 26 and fractional sections 27, 28, 29, 31 and 32 and sections 33, 34 and 35.

T. 10 S., R.15 E.

Section 3, Lots 3 and 4.

Section 4, Lots 1, 2, 3, and 4. The S. 1/2 of the NE.1/4, the S. 1/2 of the NW. 1/4 and the N.1/2 of the SW. 1/4.

All of sections 5 and 6.

Section 7. The NE. 1/4, lots 1, 2, 3, and 4, the E.1/2 of the NW. 1/4 and the NE. 1/4 of the SW. 1/4.

Section 8. The N. 1/2 of the NW. 1/4.

William McKinley.

(COPY)

EXECUTIVE MANSION

April 1, 1899.

It is hereby ordered that the Fort Stanton abandoned military reservation, New Mexico, containing ten thousand two hundred and forty acres, more or less, with the buildings thereon, be, and it is hereby, reserved and set apart for the use of the Marine-Hospital Service.

Excepting that the force and effect of this order shall not apply to any lands to which, prior to the date hereof, valid claims may have attached under the homestead or mineral land laws.

(Signed) WILLIAM McKINLEY

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

KEY WEST, FLORIDA.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.B.

A. L. PARSONS,
Civil Engineer, U. S. N.

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

U. S. MARINE HOSPITAL, KEY WEST, FLORIDA.

Report of inspection made February, 1915, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The Marine Hospital reservation at Key West, Fla., is located at the western end of the town, between the navy reservation on the north and the army reservation with Fort Tayler on the south. The city of Key West lies to the eastward and the Gulf of Mexico to the westward. A small piece of land and a substantial building owned by the Weather Bureau is also located at the northern end of the reservation.

The site facing the Gulf is very attractive and commands an extensive view of the harbor and sea and possesses the advantage of direct breezes from the water. A Sea Wall extended along the water front until October 14, 1910, when the central part was destroyed by a hurricane aided by the pounding of timbers from a dock which it had destroyed to the southwest.

The reservation is irregularly pentagon in shape, consists of one and a half acres of land with a coral base and the longest side is toward the water front.

The hospital building is located near the center of the reservation. It is a two story, basement and attic brick building with inclosed and screened porches on the east and west sides. At the northern part of the reservation is a small one story cottage used as Pharmacist's quarters and a fresh water cistern. To the south are located a large cement cistern for rain water, laundry and attendants' quarters, storeroom, old mortuary, carpenter shop and out-house.

The grounds are well kept, well sodded, contain some handsome tropical trees, such as cocoanut, Australian Pine, a peculiar variety of oak, olive, etc., and present a neat and attractive appearance.

(2) History.

An appropriation was made by Congress in 1844 for the erection of a Marine Hospital at Key West, Florida and a brick building, consisting of an attic, two stories and a basement, with capacity for fifty patients, was completed in April, 1845.

The hospital was partially destroyed by a hurricane on October 11, 1846, but was repaired in 1847. Both the buildings and grounds have been damaged by storms or hurricanes several times since 1846 and the latest injury suffered was the destruction of the handsome and substantial sea wall on the water front on October 14, 1910.

(3) Need for a Marine Hospital.

A marine hospital has been maintained by the Government at Key

U. S. MARINE HOSPITAL, KEY WEST, FLORIDA.

Report of inspection made February, 1919, with recommendations as to policy to be pursued.

I.

GENERAL CONSIDERATIONS.

1) Location.

The Marine Hospital reservation at Key West, Fla., is located at the western end of the town, occupies the navy reservation on the south and the navy reservation with Fort Taylor on the north. The city of Key West lies to the eastward and the Gulf of Mexico to the westward. A small island and a small spit of land are a substantial breakwater built by the Treasury Department located at the northern end of the reservation.

The site facing the Gulf is very attractive and commands an extensive view of the harbor and sea and possesses the advantage of direct breezes from the water. A sea wall extended along the water front would, October 14, 1920, when the central part was destroyed by a hurricane and by the pounding of timbers from a scow which it had destroyed to the southward.

The reservation is irregularly portrayed in shape, consists of one and a half acres of land with a sand base and the lowest site is nearer the water front.

The hospital building is located near the center of the reservation. It is a two story, basement and attic brick building with tastefully treated porches on the east and west sides. At the northern part of the reservation is a small one story storage yard as the municipal quarantine is located water station. To the south are located a large cement cistern for water, laundry and attendants' quarters, storeroom, old workshop, water shop and out-houses.

The grounds are well kept, well ordered, contain some beautiful trees, such as poinciana, australian pine, a peculiar variety of palm, olive, etc., and present a neat and attractive appearance.

2) History.

An appropriation was made by Congress in 1904 for the erection of Marine Hospital at Key West, Florida and a brick building, consisting of kitchen, two stories and a basement, with capacity for eighty patients, was completed in April, 1845.

The hospital was partially destroyed by a hurricane on October 11, 1846, but was repaired in 1847. Both the building and grounds have been damaged by storms or hurricanes several times since that and the hospital was injured and the destruction of the kitchen and stairhall was complete on the water front on October 14, 1919.

Need for a Marine Hospital.

A marine hospital has been maintained at Key West, Florida, since

West since 1845 and the indications are that it will be necessary to continue it. Owing to the isolated position of Key West and the fact that the nearest Marine Hospital is at Mobile, Alabama or Savannah, Ga., this station may be looked on as one of refuge and emergency, being used at times by the U. S. Army and Navy and the Revenue Cutter Service. In fact, a naval hospital has not been placed at Key West for the reason that the Marine Hospital could be used when necessary for the treatment of these patients.

When the U. S. S. S. Maine was sunk in Havana Harbor in 1898, the injured survivors were cared for in the Marine Hospital at Key West, and sick and injured soldiers, during the war with Spain, were also treated therein.

(4) Adequacy of Plant.

The present plant will be adequate when buildings now under construction and for which appropriation has been made are erected. These are surgeon's quarters, laundry, attendants and storage building, necropsy and unserviceable property building and repairs to the sea wall.

The erection of these structures will remove the medical officer from the main building and the space vacated by him can be used for Pharmacist's quarters, executive, isolation and other purposes. Minor alterations and repairs are required as recommended under Section III.

(5) Acquisition or Disposal of Land.

No part of the present reservation should be disposed of, as it is small enough for the requirements of the station. Additional land to the south of the present station should be secured from the War Department on which to locate a quarantine detention station and also provide isolation facilities for both establishments.

(6) Future Development or Disposal of Plant.

With the improvements described in paragraph (4) and the acquisition of addition land, the capacity of the plant will be adequate to meet all the probable prospective needs of the station. None of the present plant should be disposed of.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended, $1,320.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended, 600.00

(3) Legislative Appropriation for New Construction
(for details see appendix C)
Total estimated cost of work recommended, 500.00

t since 1845 and the indications are that it will be necessary to pur-
ase it. Owing to the isolated position of Key West and the fact that the
resent Marine Hospital is at Mobile, Alabama or Galveston, Tex., this situ-
tion may be looked on as one of future and emergency, being used at times
the U. S. Army and Navy and the Revenue Cutter Service. In fact, a
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ients.

When the U. S. S. Maine was sunk in Havana Harbor in 1898, the
ured survivors were moved ear in the Marine Hospital at Key West, and
k and injured soldiers, during the war with Spain, were also treated
ere.

) Adequacy of Plant.

The present plant will be adequate even building for major con-
truction and for which appropriations has been made are erected. These
e surgeon's quarters, laundry, outhouses and storage building, necessary
and conservatively proper building and repairs to the new well.

The erection of these structures will remove the actual either
on the main building and for space vacated by the one to be used for Surgeon
ell's quarters, especially, isolation and other purposes. Minor altera-
ons and repairs are requested as recommended under Section III.

) Acquisition or Disposal of Land.

No part of the ground reservation should be disposed of, as it is
ll enough for the requirements of the station. Additional land in the
ch of the present station would be acquired from the Navy Department on
ch to locate a quarantine detention station and also private hospital
ctities for both establishments.

) Future Development or Disposal of Plant.

With the improvements specified in paragraph (1) and the acquisi-
on of additional land, the capacity of the plant will be adequate to meet
l the probable requirements of the station. None of the present
ant would be disposed of.

II.

SUMMARY OF REQUIRED APPROPRIATIONS.

) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended, [illegible]

) Appropriation for Repairs and Preservation of Public
Buildings. (for details see appendix B)
Total estimated cost of work recommended, 800.00

) Legislative Appropriation for New Construction
(for details see appendix C)
Total estimated cost of work recommended, [illegible]

(4) Appropriations for Administrative Equipment.
(for details see appendix D)
Total estimated cost of items recommended, $645.35

T O T A L - - - - - - - $3,065.35

(5) Personnel.

Adequate.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

The hospital building is an English basement, two story and open attic, stuccoed on brick masonry building, non-fireproof, tin deck, asbestos shingle roof. All floors in basement are cement except kitchen which has D & M pine, all other floors are D & M pine except terrazzo floor with tile base in operating room. All trim throughout the building is pine, painted. Front and rear central verandas are screened and have D & M ceilings. All toilet rooms in building are built in on inclosed portion of verandas. The plaster work throughout is painted and the building is well kept. Electric radiator heat, electric light. Floor area, 11,135 square feet. Repairs to plaster in operating room needed.

Building No. 2. The Pharmacist's quarters is a one story frame cottage on brick piers, has plastered walls and ceilings in bedroom, parlor, dining room and pantry. All others are D & M sheathing, painted. The building is unsatisfactory and should be removed, to make room for new Surgeon's residence authorized. Electric radiator heat, electric light. Floor area 1,739 square feet.

Building No. 5. The laundry and attendants' quarters building is a two story frame structure, first story used as a laundry has a cement floor, second story attendants' quarters has a wood floor. D & M sheathing throughout, condition fair only. There is a one story leanto against the east end of this building, to house motor and geared pump. Building has shingle roof, painted pine inside and outside; should be removed when new buildings authorized are completed. No heat, electric light. Floor area, 460 square feet.

Building No. 6. The storehouse and attendants' quarters, front half, two stories with tin roof, rear half, one story and shingle roof. First story used for unserviceable property and heavy supplies, second story quarters for two attendants. First story unfinished, second story D & M walls and ceilings, painted. Building old and should be removed, when new building authorized is completed. No heat, electric light. Floor area 275 square feet.

) Airports, Stations for Administrative Purposes.
(for details see appendix B)
Total estimated cost of these recommendations. [illegible]

T O T A L - - - - - - - - $[illegible].55

) Personnel.

Adequate.

III.

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

) Building in General.

The hospital building is an English Bungalow, two story and open [illegible], supposed on brick masonry buildings, non-fireproof, tile roof, asbestos [illegible] roof. All floors in basement are concrete, every storey stories with the [illegible] B plan, all other floors are B & M plan wooden terrazzo floor with the [illegible] in operating room. All trim throughout are milliken co plan, painted [illegible] and rear central verandas are screened and have T & V ceilings. All [illegible] rooms in building are built in or inclosed partition of [illegible]. [illegible] plaster work throughout is painted and the building is well lighted. Elevator [illegible] radiator heat, electric light. Floor area, 12,[illegible] square feet. Re-[illegible] to plaster in operating room needed.

Building No. 2. The Superintendent's quarters is a one story frame [illegible] on brick piers, has plastered walls and partitions in bedrooms, pantry, [illegible] food and pantry. All others are T & M assembly, painted. The [illegible] building is unsatisfactory and should be removed, to make room for new [illegible]'s residence substitutes. Electric portable heat, electric light. [illegible] area 1,739 square feet.

Building No. 3. The laundry and attendants' quarters building is [illegible] story frame structure. First story used as a laundry for a general [illegible], second story attendants' quarters has a real floor. T & M assembly [illegible] throughout, construction fair only. There is one story large addition [illegible] east end of this building, to house water and power plant. Building [illegible] shingle roof, painted plus tinnie and outside, should be removed when [illegible] buildings substitutes are completed. No heat, electric light. Floor [illegible], 600 square feet.

Building No. 5. The storehouse and attendants' quarters, frame [illegible], two stories with tile roof, rear half, one story and [illegible] roof. [illegible] story used for housekeeping property and laundry supplies, second [illegible] quarters for the attendants. First story partitions, second story [illegible] walls and ceilings, painted. Building also should be removed, [illegible] for building authorized is required. No heat, electric light. [illegible] area 272 square feet.

Building No. 9. The carpenter shop, one story wood frame building on piers, no interior finish, should be removed when new building authorized is completed. No heat, electric light. Floor area 390 square feet.

Building No. 7. The attendants' quarters, on cement piers, wood frame, shingle roof, clapboard exterior, one room, in bad condition. Interior pine trim, side walls and ceilings of D & M pine, painted. Should be removed when new attendants' quarters building is completed.

(2) Offices.

Surgeon's Office. Located in central part of first floor of main building. It is a large room, rather poorly lighted on account of the porches on the east and west sides of the building and needs chairs, desk, book cases and waste paper baskets.

Pharmacist's Office. Located in the same room as the dispensary and the northwest corner of the first floor, across the hall from the Surgeon's office. It is a large, well lighted room and sufficiently equipped for the needs of the station.

(3) Visitors' Reception Room.

No special room set apart for this purpose. Visitors are received in the hall of the hospital or in the Pharmacist's office. Arrangement satisfactory.

(4) Examining Room.

No special room assigned for this purpose. Examination of patients is made in the Surgeon's office or in the general surgical operating room or in the wards. No special room is required at present.

(5) Kitchen and Diet Kitchens.

The kitchen is located in the northeast corner of the basement. It is a well kept and neat in appearance and has a fair equipment, but has no proper pantry or storage room. A refrigerator and closets are used for such purposes.

There are no diet kitchens. Food is carried on trays from the kitchen to the wards and dining rooms. There is no dumbwaiter in the building. Under present conditions, they are not needed.

(6) Pantry and Food Storage.

No room available for this purpose. Closets in the kitchen and a refrigerator answer for the needs of the station.

(7) Storerooms.

A general storeroom and one for unserviceable property is located in the lower part of the building, to the south of the large cistern. A

Building No. 9. The carpenter shop, one story wood frame building on piers, no interior finish, should be removed when new building mentioned is completed. No heat, electric light. Floor area 360 square feet.

Building No. 7. The attendants' quarters, on cement piers, wood frame, shingle roof, clapboard exterior, one room, in bad condition. Interior pine trim, side walls and ceiling of D & M pine, painted. Should be removed when new attendants' quarters building is completed.

c) Offices.

Surgeon's Office. Located in central part of first floor of main building. It is a large room, rather poorly lighted on account of the porches on the east and west sides of the building and means chairs, desk, book cases and waste paper baskets.

Pharmacist's Office. Located in the same room as the dispensary and the northwest corner of the first floor, across the hall from the surgeon's office. It is a large, well lighted room and sufficiently equipped for the needs of the station.

d) Visitors' Reception Room.

No special room set apart for this purpose. Visitors are received in the hall of the hospital or in the Pharmacist's office. Arrangement satisfactory.

e) Examining Room.

No special room assigned for this purpose. Examination of patients is made in the Surgeon's office or in the general surgical operating room or in the wards. No special room is required at present.

f) Patients and Diet Kitchens.

The kitchen is located in the northwest corner of the basement. It is a well kept and neat in appearance and has a fair equipment, but no proper pantry or storage room. A refrigerator and cabinets are used for such purposes.

There are no diet kitchens. Food is carried on trays from the kitchen to the wards and dining room. There is no dumbwaiter in the building. Under present conditions, they are not needed.

g) Pantry and Food Storage.

No room available for this purpose. Closets in the kitchen and a refrigerator answer for the needs of the station.

h) Storeroom.

A general storeroom and one for unserviceable property is located in the lower part of the building, to the south of the large steam. A

storeroom for drugs and hospital supplies in a room in the basement under the Pharmacist's office. A closet under the stairway facing the water front serves as a storeroom for linen and also for patients' clothing. This arrangement is unsatisfactory and suitable rooms are being provided for in the new attendants' and storage building.

A room in the unfinished attic is used for storage of the old records and miscellaneous articles and the rest of the space for useless articles of various kinds.

(8) Quarters for Officers.

Surgeon's Quarters. These quarters occupy the whole of the second floor of the hospital building. The rooms are very large and are classed as follows:- library, bedroom, dining room, kitchen, two bedrooms, toilet, servant's room and two large outside porches. These quarters are well furnished, spacious and comfortable. It is noted that the whole of this floor is used for Surgeon's quarters and the patients are limited to two small rooms at the south end of the building. The construction of a surgeon's residence is now under consideration and, when completed, these quarters should again be devoted to executive and hospital purposes and quarters for Pharmacist.

Pharmacist's Quarters. Located in a one story frame building on the north end of the reservation, consists of the following rooms:- sitting room, dining room, two bedrooms, toilet, kitchen and pantry. These rooms are well furnished and comfortable. Building to be torn down when new buildings are completed.

(9) Quarters for Attendants.

Two attendants are quartered in a room in the upper story of the laundry building, one in a room over the general storeroom, two in the old isolation house and one in the carpenter shop. These quarters are fairly furnished. A new attendants' building is now authorized.

(10) Patients' Dining Room.

This is located in a room in the central part of the basement. Used by both colored and white patients, as color line is not strictly drawn here. The equipment is adequate for present needs.

(11) Interns' and Officers' Dining Room.

There is no room for this purpose and none is needed.

(12) Attendants' Dining Room.

Located in a room in the basement next to the patients' dining room. It is suitable for the purpose and sufficiently equipped.

(13) Recreation and Smoking Rooms.

There are no rooms for this purpose. Patients smoke and conva-

storeroom for drugs and hospital supplies in a room in the basement under the Pharmacist's office. A closet under the stairway serves as a storeroom for linen and also for patients' clothing. This arrangement is unsatisfactory and suitable rooms are being provided for in the new attendants' and nurses building.

A room in the multigraphed office is used for storage of the clerks records and miscellaneous articles and the rest of the space for supplies articles of various kinds.

g) Quarters for Officers.

Surgeon's Quarters. These quarters occupy the south of the second floor of the hospital building. The rooms are very large and are planned as follows:- library, bedroom, dining room, kitchen, two bedrooms, toilet, servant's room and two large outside porches. These quarters are well furnished, spacious and comfortable. It is noted that the whole of this floor is used for Surgeon's quarters and the patients are located in two small rooms at the south end of the building. The construction of a surgeon's residence is now under consideration and when completed, these quarters should again be devoted to executive and hospital purposes and quarters for Pharmacist.

Pharmacist's Quarters. Located in a one story frame building to the north and of the reservation, consists of the following rooms:- kitchen, dining room, two bedrooms, toilet, kitchen and pantry. These rooms are well furnished and comfortable. Heating to be turn from the main buildings are supplied.

h) Quarters for Attendants.

Two attendants are quartered in a room in the upper story of the nursery building, one in a room over the general storeroom, the in the old isolation house and the two carpenter shop. These quarters are fairly furnished. A new attendants' building is now contracted.

i) Patients' Dining Room.

This is located in a room in the central part of the basement. It is both colored and white patients, as color line is not strictly drawn here. The equipment is adequate for present needs.

j) Laborers' and Officers' Dining Room.

There is no room for this purpose and none is needed.

k) Attendants' Dining Room.

Located in a room in the basement next to the patients' dining room. It is suitable for the purpose and satisfactorily equipped.

l) Recreation and Reading Rooms.

There are no rooms for this purpose. Patients meets and recre-

lescents take their recreation on the porches of the first story. This arrangement is satisfactory.

(14) Disinfecting Facilities.

There are none. A steam sterilizer should be installed in the present record room, next the kitchen, when a record room in the new building is completed. A utensil sterilizer is needed, to be located in the room next to the kitchen.

(15) Incinerators.

None. Infected dressings are burned in the kitchen range, which is very bad practice. Garbage is thrown into the bay, which is also dangerous. A water heating incinerator should be installed in the present medical storeroom when the new storage building is completed.

(16) Disposal of Soiled Linen.

Removed from the wards and rooms in hampers to the laundry. Infected linen is soaked in 5% carbolic acid solution or in 1-1000 bichloride over night. No steam chamber for disinfecting purposes at the station. The laundry is at present used for the Surgeon's family, hospital laundry work being sent out under contract at $45.00 per month.

(17) Laundry Facilities.

The present laundry is located in building No. 5 and contains three soapstone laundry tubs, one copper boiler, one iron heater. The equipment should be modernized when new quarters for laundry, now provided for in a new building, are completed.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room. The operating room is located in the northeast corner of the first floor of the hospital building adjoining the Pharmacist's office and dispensary. It is a large room with terrazzo floor, tile cove base and plain plastered walls, is well lighted and used as an operating room and surgical dressing room. It is fairly furnished but needs a new wash up sink with pedal or knee attachments and new lighting fixtures.

Surgical Dressing Room. Dressing is done in general operating room. When the second story is vacated by the Surgeon, a room for this purpose can be set apart there.

(19) X-Ray Facilities.

None at station. Arrangements made with local authorities at current prices to do needed X-Ray work for the hospital.

(20) Laboratory.

No special room. There is a microscope, a few stains and some

...ecessary here their recreation on the porches of the first story. Pain ...management is actual story.

(4) Sterilizing Facilities.

There are none. A steam sterilizer should be installed in the ...present record room, next the kitchen, when a record room in the new build-...ing is completed. A portable sterilizer is needed, to be located in the ...room next to the kitchen.

(5) Laundry.

None. Infected dressings are burned in the kitchen range, which ...is very bad practice. Garbage is thrown into the bay, which is also ...room. A water heating incinerator should be installed in the present ...storeroom when the new storage building is completed.

(6) Disposal of Soiled Linen.

Removed from the wards and rooms in hampers to the laundry. In-...fected linen is soaked in a carbolic acid solution or in 4-1000 bichloride ...of mercury. No steam sterilizer for disinfecting purposes at the station. ...The laundry is at present used for the Surgeon's family, hospital laundry ...work being sent out under contract at $45.00 per month.

(7) Laundry Facilities.

The present laundry is located in building No. 5 and contains three ...stations laundry tubs, one copper boiler, one iron heater. The equipment ...would be moderated when new quarters for laundry, now provided for in a ...new building, are completed.

(8) Operating and Surgical Dressing Rooms.

Operating Room. The operating room is located in the northeast ...corner of the first floor of the hospital building adjoining the Pharmacist's office and dispensary. It is a large room with terrazzo floor, ...a cove base and plain plastered walls, is well lighted and seems to be an ...operating room and surgical dressing room. It is fairly furnished and ...has a new wash up sink with pedal or knee attachments and new lighting ...fixtures.

Surgical Dressing Room. Dressing is done in general operating ...room. When the second story is vacated by the Surgeon, a room for this ...purpose can be set apart there.

(9) X-Ray Facilities.

None at station. Arrangements made with local authorities at Key West ...to do medical X-Ray work for the hospital.

(10) Laboratory.

No special room. There is a microscope, a few stains and some

other accessories, sufficient for ordinary clinical work. No facilities for Wasserman test. Work is done in operating room. A small room should be set apart for this purpose in the new attendants' and laundry building.

(21) Dispensary.

This is located in the same room as the Pharmacist's office. It is sufficiently equipped for the needs of the station.

(22) Wards for Seamen.

There are two main wards for seamen, one on the ground floor for colored patients and one on the first floor over it for white patients. The wards are exposed on three sides and are light and airy. The ground floor ward is deficient in ceiling height, but with the free circulation of air its low cubic air space per bed does not seem to be seriously objectionable.

A small ward on the first floor is available for special cases when no used for Revenue Cutter officers.

(23) Quiet Wards.

There are no wards specifically set aside for this purpose. The small ward above referred to can be used for the purpose when not required for sick officers.

(24) Wards for Revenue Cutter Officers.

The special ward on the first floor is designed to be used for this purpose when needed.

(25) Toilet Facilities.

The toilet facilities are located on the rear verandas of the first and second floors of the main building and are poorly equipped. New lavatories should be provided to replace those now in use and all lead traps and waste connection should be superceded by modern equipment. There is an old privy on the sea wall which should be removed as soon as the new attendants' quarters building, now provided for, is completed.

(26) Portable Tubs.

One, without rack, at station is in good order. Few cases of typhoid received at Key West and equipment is sufficient.

(27) Padded Cells.

No provision for the care of violent alcoholics or insane patients except an old Humane Restraint apparatus. There is no restraint sheet at the station, nor any room for the care of such cases and no arrangement with local authorities. A restraint sheet should be provided.

other accessories, sufficient for ordinary clinical work. No facilities for Processing tank. Not in use in operating room. A small room should be set apart for this purpose in the new attendants' and laundry building.

(d) Dispensary.

This is located in the same room as the Commanding's office. It is satisfactorily equipped for the needs of the station.

(e) Rooms for Patients.

There are two wards for patients, one on the ground floor for colored patients and one on the first floor over it for white patients. The wards are equipped on iron beds and are clean and dry. The general floor ward is included in building inspection, but with the few patients in it for the few months a very space per bed does not seem to be actually obtainable.

A small ward on the first floor is available for medical cases when no need for housing officer officers.

(f) Quiet Ward.

There are no wards specifically set aside for this purpose. The small ward above referred to can be used for the purpose when not required for sick officers.

(g) Wards for Persons Under Quarantine.

The special ward on the first floor is available to be used for this purpose when needed.

(h) Toilet Facilities.

The toilet facilities are located on the rear extension of the first floor. Floors of the main building and rear extension are tile. The water closet is provided to replace those now in use and all lines of waste connection should be accomplished by quarter additions. There is no bath and privy on the ward which should be provided in connection with the attendants' quarters building, now provided for, in the new.

(i) Fire Fighting.

One, without work, at station is in good order. Fire cases of type recently received at Fort Worth and equipment is sufficient.

(j) Water Supply.

The provision for the care of insane patients on Lunes problem is not a good temporary expedient. There is no residential quarter at station, nor any room for the care of such cases and no arrangement with local authorities. A reservoir about should be provided.

(28) Necropsy Facilities.

The present necropsy building is now being used as a paint shop. When the new necropsy facilities authorized are completed, these needs will be amply provided for.

(29) Isolation Facilities.

None. Under the present conditions of the buildings, provision should be made for isolation purposes by the erection of at least two tent houses, which would also be available for tubercular cases.

(30) Out-Patient Office.

Out-patients are treated at the hospital as it is convenient to the water front.

(31) Floor Space.

The total net floor space of the main hospital building is as follows:

Ground floor	2,162	square	feet
First floor	2,201	"	"
Second floor	3,126	"	"
	7,489	"	"
Total hall space	3,646	"	"
TOTAL	11,135	"	"

The total net floor space for hospital uses is 39%
" " " " " " " quarters (exclusive of hall space) is 28%
The total net floor space for hall space (including quarters) is 33%
100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital, excepting the special ward, is 18, maximum 20. Three or four additional beds can be accommodated in the special ward if necessary. On a normal basis, each patient in the two large wards has 84 square feet of floor space and 630 and 920 cubic feet of air space, respectively.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913 and 1914 and also for the period from July 1 to December 31 for the calendar years 1913 and 1914.

	Fiscal Years			Jul 1 to Dec 31	
	1909	1913	1914	1913	1914
No. days hospital relief furnished,	2689	3096	2389	996	1348
Daily average hospital patients,	7.36	8.48	6.54	-	--
Total daily cost per hospital patient	[illegible]	$2.88	$5.30		
No. of hospital patients,	57	134	105		
" " out-patients,	214	325	286		
" " times treated,	254	382	407		

(e) Nursery Facilities.

The present nursery building is now being used as a paint shop. When the new nursery facilities authorized are completed, these rooms will be amply provided for.

(29) Isolation Facilities.

None. Under the present conditions of the building, provision should be made for isolation purposes by the erection of at least two tent houses, which would also be available for interpolar cases.

(30) Out-Patient Clinic.

Out-patients are treated in the hospital as it is convenient to the water front.

(31) Floor Space.

The total net floor space of the main hospital building is as follows:

Ground floor	2,763	square feet
First floor	2,363	"
Second floor	2,363	"
	7,489	"
Total hall space	3,646	"
TOTAL	11,135	"

The total net floor space for occupied rooms is 2,97[illegible] "
" " " " " quarters (exclusive of hall space) is [illegible] sq ft
The total net floor space for hall space (including quarters) is [illegible] sq ft
[illegible]

(32) Bed Capacity per Square Allowed.

The total normal capacity of the hospital, excluding the quarters, is 16, maximum 20. Three or four additional beds can be accommodated in the special ward if necessary. On a normal basis, only patients in the two large wards has 64 square feet of floor space and 630 cubic feet of air space, respectively.

(33) Relief Afforded the Poor.

The following table shows the relief afforded by the station for the fiscal years 1912, 1913 and 1914 and also for the period from July 1 to December 31 for the calendar years 1913 and 1914.

	Fiscal Years			July 1 to Dec. 31	
	1912	1913	1914	1913	1914
Days hospital relief furnished,	1,885	[illegible]	[illegible]	645	1,[illegible]
Daily average hospital patients,	7.36	5.48	6.34	-	--
Total daily cost per hospital patient	$[illegible]	$[illegible]	$[illegible]		
Cost of hospital patients,	[illegible]	[illegible]	[illegible]		
" " [illegible]	[illegible]	[illegible]	[illegible]		

On January 31 there were 7 patients, including one chronic. Tubercular patients, none. Of the 7 patients, 4 were white and 3 colored. The maximum daily number of patients in the hospital for the last ten years was approximately 18 to 20, minimum 2 to 4. The station was most active from 1897 to 1905, the maximum number of days of hospital relief furnished being 5,863 days in 1898.

The number of days hospital relief furnished in 1914 was 11% less than in 1909 and 23% less than in 1913. For the past six months of the fiscal year 1915 it has been 35% greater than for the same period of last year. The number of out-patients and times treated has been about the same for the last two years.

(34) Ambulance Service.

No station equipment. Services, when required, are furnished by Army ambulance without cost. Occasions requiring such service are infrequent. Facilities are adequate.

(35) Heating, Power Plant and Ventilation.

There is no heating or power system needed at this point other than electric radiators which are used at short intervals only on cold days. Power should be installed only in connection with steam sterilizer, recommended under paragraph 14, which could be installed in the room under the present pharmacy, when steam lines can also be easily run to sterilizers in operating room where all sterilizing apparatus should be steam operated. It is probable that a steam generating incinerator can be obtained of sufficient capacity to provide steam for operating room apparatus. Ventilation is via windows and doors which is adequate and satisfactory.

(36) Illumination.

All buildings requiring light are being supplied with a new electric lighting equipment which, when completed, will be ample and satisfactory. Electric current is supplied from the city of Key West.

(37) Decoration.

The buildings are all painted on the inside and out in a very satisfactory manner and are well kept up in this respect.

(38) Telephone and Call Systems.

The station has one telephone with extension to Surgeon's quarters, direct connected to city exchange, Bell system. There is no intercommunicating telephone system.

There is a call system with annunciator on rear porch first story, with push button in surgeon's quarters, office, Pharmacist's quarters and office. A separate line connects Surgeon's office with Pharmacist's quarters. All are in good condition. There are no means of signalling

On January 31 there were 7 patients, including one chronic. Ordinary patients, none. Of the 7 patients, 4 were male and 3 female. The maximum daily number of patients in the hospital for the last five years is approximately 15 to 20, minimum 3 to 4. The station was most active from 1897 to 1903, the maximum number of days of hospital relief furnished being 5,883 days in 1898.

The number of days hospital relief furnished in 1914 was 33% less than in 1909 and 23% less than in 1913. For the past six months of the present year 1915 it has been 38% greater than for the same period of last year. The number of out-patients and times treated has been about the same for the last two years.

d) Ambulance service.

No static equipment. Services, when required, are furnished by the ambulance without cost. Horses requiring such service are maintained. Facilities are adequate.

e) Heating, Power Plant and Ventilation.

There is no heating or power system needed at this point other than electric radiators which are used at night (generally only on cold days). Power should be operated only in connection with alarm signals, regulated under paragraph 14, which could be installed in the room adjoining the present pharmacy, when alarm bells can also be easily run to electricators operating from where all ventilating apparatus should be given operation. In previous that a steam generating installation can be obtained of sufficient capacity to provide steam for space heating from adjacent building. Ventilation can be via windows and doors which is adequate and satisfactory.

f) Illumination.

All buildings requiring light are being equipped with a new electric lighting system, from complete, will be single and independent. Electric current is supplied from the city of Bay Shore.

g) Decoration.

The buildings are all painted on the inside and are in very satisfactory manner and are well kept up in this respect.

h) Telephone and Call System.

The station has one telephone with extension to Surgeon's quarters, and connected to city exchange. Call system. There is no intercommunicating telephone system.

There is a call system with annunciator on rear porch first story, with push button in surgeon's quarters, office, Superintendent's quarters and station. A separate line connects Surgeon's office with Superintendent's quarters. All are in good condition. There are no means of signalling

from wards. When the new buildings for which funds are available are constructed, an intercommunicating telephone system should be installed.

(39) Ice and Refrigerating Facilities.

There is no refrigeration plant and none is needed. Artificial ice is supplied to refrigerators as needed at $0.40 per CWT, which is satisfactory in practice and convenience.

(40) Water Supply and Fire Protection.

Water supply for drinking and washing purposes is rain water, stored in two concrete cisterns of 123,000 gallons and 18,000 gallons capacity, respectively.

Salt water is used for fire and flushing purposes, including water closets, and is obtained from city supply. Pressure is about 20 pounds. Connection to city main is 4 inch. A small motor driven pump discharges water from cisterns to two tanks in the attic of the main building. There are three fire hose racks, one on each floor of main building, each equipped with 100 feet of 1½ inch linen hose and nozzle. An additional 100 feet of hose is carried on a wheel hose reel. There are 6 chemical fire extinghishers, 3 gallon Underwriter type. Six additional fire extinguishers should be provided, so that each building may be properly equipped. There are two city fire hydrants, each one block away. City fire engine house is within two blocks.

(41) Fire Alarm System.

Fire signals are struck by hand on gong on ground floor of main building. Drills are held weekly. There is no city fire alarm call box nearby. Facilities are adequate.

(42) Sewer and Other Drainage.

Sewerage from the various buildings is discharged into sea through three 4 inch cast iron pipe lines, and one 4 inch terra cotta pipe line from building No. 6. Rain water is collected in cisterns. The out-fall ends of these lines were damaged when the sea wall was partially destroyed. When the wall is repaired and the proposed buildings constructed, the various sewer lines should be combined into one out-fall, if grades will permit, and the discharge pipe carried 100 feet out from the sea wall on permanent construction.

(43) Streets, Roads, Walks, Fences and Grounds.

There is a macadam driveway leading from the entrance at junction of Front and Emma Streets to rear of main building. There is a cement sidewalk on the streets along the station boundary, with cement walks leading to the various buildings. The boundary on Emma and Front Streets and adjoining the Army Reservation has ornamental iron fence. The portion along the Army Reservation is in bad condition and should be repaired. The remainder of the fence and other improvements are in good condition and ade-

[illegible] warm. When the man burglarized [illegible] there are [illegible] pro-
[illegible], an intercommunicating telephone system should be installed.

[illegible]) In the Refrigeration Facilities.

There is no refrigeration plant and none is needed. Artificial
[illegible] is supplied to refrigerators as needed at 25.00 per 100#, which is sat-
[illegible]factory to pressing and conveniences.

[illegible]) Water Supply and Fire Protection.

Water supply for drinking and washing purposes is rain water, stored
[illegible] two concrete cisterns of 165,000 gallons and 15,000 gallons capacities,
[illegible]spectively.

Salt water is used for fire and flushing purposes, [illegible] water
[illegible], and is obtained from city supply. Pressure is [illegible] to provide
[illegible] from city main is a 4 inch. A small motor driven pump distributes
[illegible]ter from cisterns to two tanks in the attic of the main building. There
[illegible] three like mess rooms, one on each floor of main building, each equipped
[illegible] 100 feet of 1½ inch linen hose and nozzle. An additional 100 feet of
[illegible] is carried on a wheel hose reel. There are 6 chemical fire extinguis-
[illegible], 3 gallon inverter type. Six auxiliary fire extinguishers should
[illegible] provided, as this wood building may be properly equipped. There are
[illegible] only fire hydrants, each one block away. Only fire engine house is
[illegible] within two blocks.

[illegible]) Fire Alarm System.

Fire [illegible] are struck by hand on gong on ground floor of main
[illegible]ding. Drills are held weekly. There is no city fire alarm call box
[illegible]ery. Facilities are adequate.

[illegible]) Sewer and Other Drainage.

Sewerage from the various buildings is discharged into one [illegible]
[illegible] a tank cast iron pipe lines, one one 6 inch [illegible] pipe line
[illegible] building No. 6. Main water is collected in cisterns. The sewerage
[illegible]de of these lines were changed when the new wall was recently constructed.
[illegible] the wall is required now the proposed building connections. The sa-
[illegible] sewer lines should be combined into one main. If [illegible] will per-
[illegible], and the drainage pipe carried 100 feet out from the sea wall on sa-
[illegible] concrete construction.

[illegible]) Streets, Roads, Walks, Curbs and Gutters.

There is a wooden driveway leading from the entrance at junction
[illegible] Fleet and Elm Streets to rear of main building. There is a small ceme-
[illegible]ly on the streets along the station boundary, with [illegible] leading
[illegible] the various buildings. The boundary on Elm and Fleet Streets and ad-
[illegible] the Army Reservation has crossed dirt lanes. The walkways along
[illegible] Army Reservation in the main quadrangle are capable of repairing. The re-
[illegible]mainder of the lanes and other improvements are in good condition and ade-

quate. A low concrete wall separates Marine Reservation from that of Weather Bureau on the north.

(44) Wharves, Sea Walls, Etc.

Originally, the station had a small wharf on light iron piles, with wooden superstructure, which extended 100 feet from main shore line. There was only two or three feet of water at its end. The entire water front was protected with concrete wall and concrete pavement back of it, with returns at the ends and a projection opposite the hospital building. The wharf and large part of the wall were destroyed or badly damaged by the hurricane of 1910. No repairs whatever have been undertaken.

Early steps should be taken to reconstruct and repair the sea wall. The wharf should not be rebuilt. There is practically no depth of water near the shore (only one foot 100 feet out) and the demand for wharf facilities are slight. Wharves in the nearby Naval station and city give ample facilities for this purpose. To construct a permanent wharf to any adequate depth would be expensive and the expenditure unwarranted by the needs of the station.

In reconstructing the seawall the projecting portion opposite the main building should be omitted as it serves no useful purpose. The amount of additional land is not of material use, as the wall itself is entirely destroyed, and its replacement would largely increase the cost of the work. Back of the projection and in line with the rest of the wall, there is now in place the foundation of what was probably the original wall. This can be utilized as a part of the new work.

Immediate repairs of the wall are urgently needed. At the same time, all sewers should be combined into one discharge line and carried at least 100 feet out from the sea wall in permanent construction. A special appropriation is available for this work.

(45) Live Stock and Vehicles.

None, and none are needed.

(46) Personnel.

There are on duty at this station, one commissioned officer, one Pharmacist and seven attendants, classed as follows:- 1 nurse, 1 assistant nurse and dining room man, 1 night nurse and watchman, 1 clerk, 1 carpenter, 1 yardman, 1 messenger. Six of these attendants are provided with quarters on the station and one, the night nurse and watchman, goes to his home during the day. The above named force is sufficient for the needs of the station.

(47) Records.

The records of the station are properly kept and in good order, with exception of the clinical records, which are rather brief and incomplete.

[illegible]to. A low concrete wall separates Garden Beach from the [illegible] Harbor Barracks on the north.

[illegible]) Structure, Sea Walls, Etc.

Originally, the station had a small wharf on light iron piles, [illegible] wooden superstructure, which extended from the main office [illegible] was only two or three feet of water at its end. The entire wharf was protected with concrete walls and concrete pavement back of it. [illegible] return at the end was a projection opposite the hospital building. [illegible] wharf and large part of the wall were destroyed or badly damaged by [illegible] hurricane of 1926. No repairs whatever have been made.

Early steps would be taken to reconstruct and repair the sea wall. [illegible] wharf should not be rebuilt. There is practically no depth of water [illegible] the above (only one foot at most) and the bound the depth of [illegible] tion are silted. Barges in the harbor have small capacity [illegible] a facilities for this purpose. To construct a permanent wharf in any [illegible] depth would be expensive and the expenditure unwarranted by the [illegible] of the station.

In reconstructing the sea wall the protection provided by the [illegible] building should be utilized as it serves the purpose of [illegible] restrictions. The concrete [illegible] foundations are in not of material use, as the wall itself is entirely [illegible] removed, and the replacement would probably increase the cost of the [illegible]. Most of the projections and in line with the front of the wall, there [illegible] to place the foundation of what may probably the original wall. [illegible] can be utilized as a part of the new work.

Immediate repairs of the wall are urgently needed. At the same [illegible], all aprons should be constructed with the stepping [illegible] [illegible] cut out from the sea wall in permanent construction. A [illegible] appropriation is available for this work.

[illegible] Piers and Landings.

None, and none are needed.

[illegible]Personnel.

There are on duty at this station, one commissioned officer, one [illegible] and seven enlisted men, classed as lighthouse keepers, [illegible] [illegible] station and one man, I night watch and watchman, 1 clerk, 1 storekeeper, [illegible]man, 1 messenger. Six of these officers are provided with quarters [illegible] station and one, the night watch and watchman, live on the Sand [illegible] Key. The crew should (also) be sufficient for the needs of the sta-

[illegible]Property.

The records of the station are properly kept and in good order. [illegible] of the station property, which is in fair condition and [illegible].

(48) Books.

The medical books in the station library are mostly old and not of much use for reference.

(49) Purchase of Supplies.

Groceries and meats are purchased under yearly contract obtained in the usual manner. Other supplies in open market. This arrangement is satisfactory for this isolated station.

APPENDIX A

Marine Hospital at Key West, Florida.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
1	Repair plaster in operating room	$60.00
14	Preparing present Record and Medical Storeroom for steam sterilizer, laying new cement floor, with cesspool drain.	200.00
38	Intercommunicating telephone system	800.00
40	6 chemical fire extinguishers, 3 gal. Underwriter type	60.00
43	Repairs to fence	200.00
	T O T A L - - - - - - - -	$1320.00

APPENDIX 2

Marine Hospital at Los Vegas, Florida.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Program Report.	Item	Estimated Cost.
1	Repair plaster in operating room	100.00
14	Properly ground floors and finish floorings for steam sterilizer, laying new wood floor, etc. occupied area.	[illegible]
96	Intercommunicating telephone system	[illegible]
20	5 chemical fire extinguishers, 3 gal. Underwriter type	20.00
3	Repairs to fence	200.00
	T O T A L - - - - - - - - - -	[illegible]

APPENDIX B

Marine Hospital at Key West, Florida.

Appropriation for Mechanical & Electrical Equipment.
* * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
25	Supply four new vitreous lavatories with integral locks in place of present gang type now in use. Replace all lead waste pipes and traps with modern pattern equipment throughout Building No. 1.	$450.00
18	New wash up sink with pedal attachment for operating room.	150.00
	T O T A L - - - - - -	$600.00

ADDENDUM "B"

Marine Hospital at Key West, Florida.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * * *

Bidders mentioned hereunder are in the order of their relative importance and should be substituted accordingly.

	ITEMS	Estimated Cost.
	Supply four new vitreous lavatories with integral Jacobs Ex plates of present good type now in use. Replace all lead waste pipes and trap with chromium plated equipment Transport Building No. 1.	$ [illegible]
	Six week up-state with penal allowance for operating rent.	[illegible]
	T O T A L - - - - - - - -	$800.00

APPENDIX C

Marine Hospital at Key West, Florida.

New Construction.
****

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
29	Two tent houses for isolation and tubercular patients @ $250.00	$500.00

APPENDIX C

Marine Hospital at Key West, Florida.

New Construction.

***

APPENDIX D

Marine Hospital at Key West, Florida.

Administrative Equipment.
****

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	Estimated Cost.
2	Offices (Hospital)	$145.35
22	Wards	175.00
18	Operating and Surgical Dressing Rooms	115.00
20	Laboratory	100.00
9	Attendants' quarters	110.00
	T O T A L - - - - - - -	$645.00

APPENDIX D

Works Required on Key Work, Inverness.

Administration Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	Estimated Cost.
5	Offices (Hospital)	£[illegible]
22	Wards	[illegible]
13	Operating and Surgical Dressing Rooms	[illegible]
30	Laboratory	[illegible]
9	Attendants' quarters	[illegible]
	T O T A L - - - - - - - -	£[illegible]

Plan. Sheet No.1. J.D.Ferriss, Inspector

Quarters & Service Pump
Attendants Quarters
Coloured Attendants Quarters
Breakwater wall & Walks

Architect. Treasury Department.

Weather Bureau

U.S. Army Reservation, Fort Taylor

VIEWS OF U.S. MARINE HOSPITAL

KEY WEST FLA

GENERAL VIEW FROM WATER

GENERAL VIEW FROM STREET

FRONT LAWN & FENCE

FRONT OF MAIN BUILDING

SIDE LAWN & FENCE

FRONT LAWN & HOSPITAL

DAMAGED SEAWALL & BUILDINGS

DAMAGED SEAWALL

MARINE HOSPITAL

OPERATING ROOM

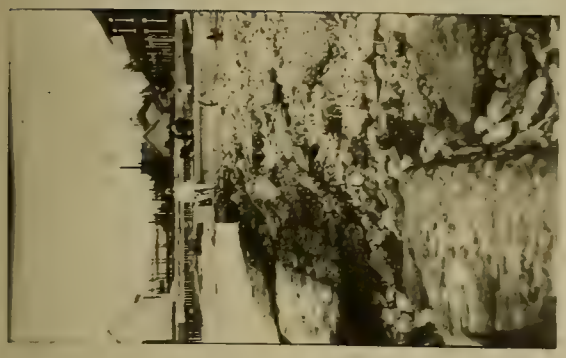
OPERATING ROOM

WARD WHITE

WARD COLORED

U.S. MARINE HOSPITAL

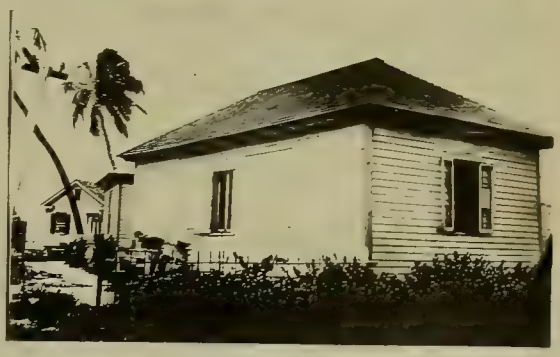
KEY WEST FLA.



DAMAGED SEA WALL

DAMAGED SEA WALL

ATTENDANTS' QUARTERS & LAUNDRY



PRESENT PAINT SHOP

STORE HOUSE & ATTENDANTS' QUARTERS

STORE HOUSE & ATTENDANTS' QUARTERS

PHARMACISTS' QUARTERS

PHARMACISTS' QUARTERS

JTC

October 2, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Key West, Florida.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

LOUISVILLE, KENTUCKY.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent
of Construction, U.S. P.B.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

Report of inspection made December 1914, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The Marine Hospital reservation at Louisville, Kentucky, is situated in what is called the Portland District in the northwest part of the city and distant about three miles from the Custom House and business center of the city. The reservation is quite large, comprising about eight acres, is quadrilateral in form and bounded on the North by High Street, on the South by Portland Avenue, on the East by 22nd Street, and on the West by 23rd Street. The grounds present a pleasing appearance, are well sodded; contain many fine trees; have good macadam roads and cement walks, and are surrounded on all sides by a handsome iron fence with elaborate gates, which cost $11,563.73.

The hospital building is of the old block type, constructed of brick, and consists of a basement, two stories, an attic and a central cupola, with porticos on each floor on the North and South sides. A brick, one-story laundry building is located near the main building to the eastward and stable, carriage and necropsy building and a tool house and paint room to the Southwest. The main building and laundry are placed on the northern end of the reservation, and about the middle of the lot, and the other buildings some distance to the Southwest.

A street-car line passes the reservation on Portland Avenue.

(2) History.

The Louisville Marine Hospital was founded by an Act of the Legislature of Kentucky on February 5, 1817. An appropriation of $10,000.00 was made and the work of construction was commenced. The land was given by Thomas Prather Cuthbert Bullitt. The sum of $8,000.00 was appropriated on November 27, 1821. It was completed and transferred from the State of Kentucky to the City of Louisville on February 27, 1826, and some years later (of the exact date of which there is no record) passed under the jurisdiction of the General Government.

The hospital was opened in 1847 for the reception of sick and disabled riversmen and was continued as such until May 1, 1863, when the patients were transferred to the Louisville Marine Hospital, now the City Hospital, and the United States Marine Hospital converted into a military hospital for the reception of sick and wounded soldiers. After the close of the Civil War the hospital was vacant until September 20, 1869, when it was again opened for the reception of marine patients.

The hospital and grounds were leased by the Secretary of the Treasury to the Sisters of Mercy for a term of two years from September 20, 1869. A regular officer of the service was assigned to duty at Louisville in September 1873 and had an office in the Custom House.

The lease and contract with the Sisters of Mercy was terminated on December 31, 1875, and the service assumed control and has maintained it since that time

(3) Need for a Marine Hospital.

The river commerce has diminished materially in recent years and there is not as much demand for hospital relief at Louisville as in former times. At the time of inspection there were only twelve patients in the hospital and the daily average during the past two years has been from sixteen to seventeen patients.

With well equipped hospitals at St. Louis and Evansville, it is believed that the river traffic can be satisfactorily provided for without a marine hospital at Louisville.

(4) Adequacy of Plant.

The present plant is old and in bad repair and the expenditure of money to put it in good condition and maintain it, is not justified for the few patients for whom hospital relief is required.

With well equipped hospitals at St. Louis and Evansville, the marine hospital at Louisville should be closed, temporary emergency cases should be sent to local hospitals, and those requiring continued treatment transferred to either of the above points.

(5) Acquisition or Disposal of Land.

The property should be retained as the base for public health work for which it is now utilized. The reservation consisting of eight acres, exclusive of buildings, is estimated to be worth $65,000.00. The value of the buildings only, $3,000.00.

(6) Future Development or Disposal of Plant.

As recommended under Paragraph 4, the marine hospital at Louisville should be closed and the property retained for public health work.

II

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1)	Appropriations for Repairs and Preservation of Public Buildings (for details see Appendix A) Total estimated cost of work recommended	$3,660.00
(2)	Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see Appendix B) Total estimated cost of work recommended	$10.00
(3)	Legislative Appropriation for New Construction (for details see Appendix C) Total estimated cost of work recommended	-------
(4)	Appropriations for Administrative Equipment (for details see Appendix D) Total estimated cost of items recommended	1,010.50
	TOTAL	$4,680.50

(5) Personnel.

Adequate.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, The Main Hospital building, is brick superstructure, three stories, attic and basement. Limestone courses at first floor, sills, lintels and column bases and second story level of column. Wood cornice, flat tin roof with cupola in center over wide hall and main stairs. All ward and living room floors are wood. Main halls oak with parquet border. All other rooms hard pine, pine trim and base throughout except in the following:

Ward toilets have terrazzo floors, tile wainscot. Operating room terrazzo floors plaster base and side walls; small closet off surgeons' hall, bath room, tile floor and wainscot. All other toilets, kitchen pantry, subsistence store room and vegetable room off kitchen have no base at all. Plaster comes to a 2-inch floor moulding.

Floors generally are D & M hard pine, not rift, except in surgeon's office, pharmacist's parlor and pharmacist's office. The pharmacy has a Tennessee marble tile floor, two colors, 4-inch and 10-inch hexagonal tile, which is in good condition. The attic has rough wide plank floors; exposed brick walls and open rafter ceiling, all other rooms have plastered walls and ceilings painted. All wood work painted, steam heat, electric light. Floor area 22,826 square feet.

Building No. 2, used as a Laundry, has two sleeping rooms for attendants which have hard pine floors, pine base and trim varnished; plastered walls and ceilings not painted. One toilet room has hard pine floor and wainscot three feet high, plastered walls and ceiling. All other rooms have cement floors, exposed brick walls, open wood rafter ceilings, all painted and in good condition; tin roof with galvanized iron ventilators over laundry rooms, steam heat, electric light. Floor area 672 square feet.

Building No. 3, The Barn and Necropsy Building, is a one-story brick, with tin roof. Cement floor throughout. Necropsy room has plastered walls and open rafter ceiling, all in good condition. There is a loft over part of the stable, with wood floor, wood doors and no other trim. No heat, electric light. Floor area 1,092 square feet.

Building No. 4, Tool House, is a brick shed with composition roof and contains a paint room with dirt floor, and the balance of the space is devoted to yard tools. Dirt floor also. No heat, no light. Floor area 420 square feet.

Building No. 5, Hot House, is an old wood framed and glazed structure sides about eight feet high. Has not been used for more than a year. There seems to be no need of this building, which is in bad condition, both as to structural and heating apparatus, and is not worth repairing. No heat, no light. Floor area 234 square feet.

[illegible]

[illegible]

[illegible]

(2) Offices.

Surgeon's Office.

Located on north side of the second floor; is a large room not well lighted and sufficiently furnished for the present.

Pharmacist's Office.

Located on the second floor of the hospital, opposite the surgeon's office. Is a duplicate in size and appearance. A revolving chair, a table, a plain chair and a new typewriter are needed for this office.

(3) Visitors' Reception Room.

There is no special room. The corridor between the surgeon's and pharmacist's offices is used for this purpose.

(4) Examining Room.

No special room for this purpose. Clinical examinations are made in the wards and in the present combined operating and surgical dressing room.

(5) Kitchen and Diet Kitchen.

The kitchen is located on the east side of the first floor of the building. Is a medium-sized room, equipped with a coal range, a small gas range, tables, sink, etc., but the utensil outfit is old and worn and needs renewal.

There is no diet kitchen. Food is conveyed from the kitchen on the first floor to the wards on the third floor by means of a dumb waiter which is worked by hand. There is no special means of warming the food after it is taken from the kitchen. A warming table is needed.

(6) Pantry and Food Storage.

A small pantry adjoins the kitchen and is ample for present needs.

Food Storage.

The room used for this purpose adjoins the pantry on the first floor; is of fair size, and suitable for the purpose.

(7) Store Rooms.

Store rooms for general supplies, drugs, bottles, hospital supplies, bedding, linen and unserviceable property are located in the northwest and middle part of the basement. A portion of the attic is used for storage of old furniture and worn out appliances.

(8) Quarters for Officers.

Surgeon's Quarters.

The entire first floor of the building with the exception of the kitchen, store room, pantry and four small rooms, used for attendants, is used for this purpose. The rooms as listed are parlor, library, three bedrooms, bath room, servants' room, dining room and kitchen.

The rooms are large, comfortably furnished and adequate, except window shades. One of the bed rooms of the surgeon's quarters is at present used by the assistant surgeon in charge ofthe station during the absence on special duty of the resident officer in charge.

3) Wards.

a. Lower's Ward.

Located on north side of the second floor in a large room well lighted and sufficiently ventilated for the purpose.

b. Commonwealth's Ward.

Located on the second floor of the hospital, opposite the superintendent's office. It is a duplicate in size and appearance. A twelve chair, a bath, a public clerk and a new typewriter are needed for this office.

c. Visitors' Reception Room.

There is no special room. The porch between the superintendent's and physician's offices is used for this purpose.

d. Receiving Room.

No special room for this purpose. Clinical examinations are made in the wards and in the present condition of crowding and overflow from the wards.

e. Kitchen and Dining Rooms.

The kitchen is located on the east side of the first floor of the building. It is a well-lighted room, equipped with a good range, a small gas range, boiler, sink, etc., but the general equipment is old and worn and needs renewal.

There is no dining room. Food is conveyed from the kitchen on the first floor to the wards in the dumb waiter or a hand waiting table, and served in bed. There is no special means of keeping the food warm before from the kitchen. A warming table is needed.

f. Pantry and Lava Lavatory.

A small pantry adjoining the kitchen and in reach the patients.

g. Food Elevator.

The food from the kitchen reaches the pantry on the first floor: on first floor, and multiplies the purpose.

h. Lifts Room.

Lifts room for general supplies, linen, bedding, surgical dressings, linen and nonessentials temporarily are located in the basement and the rest of the basement. A portion of the space is not in use because of dampness and poor ventilation and sunlight.

i. Storage for Supplies.

Basement Storage.

The entire first floor of the building are the complaints of the kitchen, pantry and room small rooms, very low ventilation, is used for the rooms. The rooms are linen, surgical supplies, library, bedding, bath room, wards' room, drying room and kitchen.

The rooms are large, comfortably furnished and adequately heated with radiators. One of the bed rooms of the superintendent's residence is in a dilapidated condition requires to change after working during the summer is. Small rooms of the resident officers is change.

Acting Assistant Surgeon's Quarters.

Consist of one medium-sized room, with a bath placed in the hallway and a small toilet closet adjoining located in the northwest wing of the second floor. A portion of the hall is also used as a dining room. Table, dishes and linen are needed. 36

Pharmacist's Quarters.

Located on second floor of the building in the west wing. Consist of a parlor, dining room, bed room, kitchen and bath room. They are comfortably and sufficiently furnished.

(9) Quarters for Attendants.

Four attendants have quarters on the first floor in the east wing of the building; three in the same wing on the second floor; three are located in the laundry building; and one, the engineer, goes to his home near the reservation at night. Some new chairs are needed for the attendants' quarters and five more wardrobes, window shades and rugs are also required.

(10) Patients' Dining Room.

Located on the second floor in the east wing. Consist of two small rooms. One is used for colored patients and one for white patients and attendants, the meals being served at different hours. New tables and new iron stone china ware are needed for both rooms.

(11) Officers' and Internes' Dining Room.

A portion of the hall next to the acting assistant surgeon's quarters is used for this purpose. Nothing in the way of equipment if needed.

(12) Attendants' Dining Room.

Located in east wing on second floor. See paragraph 10.

(13) Recreation and Smoking Room.

At present there is only one room used for this purpose, which is located in the southwest corner of the wing on the third floor. The corresponding room in the southwest corner of this floor is at present used as a laboratory for the use of the hospital and for those making examinations relative to the pollution of water. Some new chairs are needed for the room in use as a smoking room.

(14) Disinfecting Facilities.

There is a Kinyoun Francis two-ended steam disinfector with formalin ammonia attachment, all in very good condition, located in the basement of building No. 1, next the boiler room.

(15) Incinerators.

There is a very good and efficient "Kewanee" hot water heating incinerator, type A-#21, which takes care of all house garbage, infected bandages, etc. Capacity about four bushels per day. Amount accumulated about two bushels per day. Results very satisfactory. This incinerator has a cast-iron garbage pot, with wrought-iron water pipes passing through garbage chamber.

Amount communicated about the
factory. This interior was a cut-

36

(16) Disposal of Soiled Linen.

Soiled linen is placed in hampers on the porches adjoining the wards and from thence removed to the laundry in bundles made of sheets. Infected linen is soaked in 5% carbolic acid solution and then removed to the laundry. Clothing and bedding is sterilized in the steam sterilizer in the basement when considered necessary.

(17) Laundry Facilities.

Are located in a one-story building erected for that purpose and contains one American Laundry Machine Company's Century Dryer; two American Laundry Machine Company's Washers; one galvanized iron soap kettle; six slate hand tubs; one 4-track steam drying room, Troy Laundry Machine Company; one 84-inch Troy Mangle; all in good condition. One shirt machine which is out of commission for want of new polishing roll; otherwise in good condition. Three electric hand irons. There are three Willis Electric Company Motors, two horsepower each, 220 volt, 2-phase, 60-cycle; one, one and one half horsepower motor same make, and two Richmond Electric Company back-geared motors of ¾ and 1½ horsepower each, same phase and frequency.

(18) Operating and Surgical Dressing Room Facilities.

Operating room, located in the northeast corner of the third floor of the building, in a large room, well lighted and almost too large for the requirements of the station. This room is also used as a surgical dressing room at the present time and there is no separation of clean and unclean surgical cases. This can be remedied by putting a partition across the operating room, dividing it into a dressing and sterilizing room, or by closing the stairway in the adjoining hall and making two small rooms out of the hall space, one for a dressing room and one for sterilizing purposes, as shown on sketch A. There is no instrument sterilizer in the operating room but one has lately been authorized. A new operating table and some new surgical instruments are needed.

Surgical Dressing Room.

No room available for this purpose. Dressing done in wards and operating room. For recommendations see preceding paragraph.

(19) X-Ray Facilities.

There is an old and useless Otis and Clapp static machine on the station which is stored in the attic. It should be sold or otherwise disposed of. X-Ray work for the station is done by Dr. J. T. Keith of Louisville at cost of from $5.00 to $7.00 per case.

(20) Laboratory.

The room set apart for this purpose is one of the old recreation or smoking rooms located in the southeast corner of the third floor of the building. It is considered large enough for present purposes and is used for ordinary hospital clinical work, and has been used during the past season by the officers of the service engaged in the examination of polluted waters. An electric centrifuge is needed, otherwise the equipment is fair. Wasserman examinations are referred to the Hygienic Laboratory at Washington, D. C.

(21)- Dispensary.

There is a large room located next to the pharmacist's office on the second floor of the building which presents the appearance of a miniature drug store. It had a good tile floor and is fairly well equipped. A small water still is needed of a capacity of about 500 cc an hour to provide ✓

water for intravenous work.

(22) Wards for Seamen.

There are two main wards for seamen on the third floor on opposite sides of the main hall. They are exposed on three sides and are light and airy. The ward on the west side of the building is the only one in use at present. The other is unoccupied but open. The ward in use is divided into two parts by movable screens; one for colored patients and one for whites. Both colored and white patients use the same toilet room but have special fixtures assigned them. Normal capacity of each ward is sixteen, maximum eighteen. There are two small rooms on the third floor in the northwest corner of the building which are used for special cases.

(23) Quiet Wards.

There are no rooms specifically assigned for this purpose but the two small rooms in the northwest corner of the third floor are available.

(24) Wards for Revenue Cutter Officers.

There are no rooms set apart for this purpose and none are needed.

(25) Toilet Facilities.

Are ample and in good condition, except there is no separate accommodatio for syphilitic patients, but there is a separate toilet room available adjoining the present unused ward across the hall. There should be a new sink in the surgeon's kitchen and one in the pharmacist's kitchen to replace old cast-iron sinks, which are inadequate and unsanitary. The sink in the operating room is inadequate and the foot operating device for the hot and cold water faucets is broken. Temporary hand faucets have been installed. A new standard operating room fixture should be installed.

(26) Portable Tubs.

There is one zinc-lined porcelain painted tub without rack in the station. It is serviceable except that a sheet or blanket is used in place of the rack.

(27) Padded Cells.

None. There is an old humane restraint apparatus in the station but no restraint sheet and no local arrangement for the care of violent alcoholics or insane patients.

(28) Necropsy Facilities.

Are located in an addition to the stable building and contain a slate dissecting table with water drains and a floor drain. The room has cement floor; brick walls, whitewashed; open rafter ceiling; adequate for all present needs.

(29) Isolation Facilities.

There is no special building provided for this purpose. Contagious cases are sent to the City Hospital. Suspect cases are isolated in one of the two small rooms in the northwest corner of the building on the third floor.

(30) Out-Patient Office.

Located on the fifth floor of Federal building, Fourth Street, Louisville, Kentucky. Consists of two rooms; one large room used as an office and waiting room, and a smaller one used as a dispensary. Furniture sufficient. Removal of out patient office to present location has resulted in loss of patients and the name "Public Health Service" on the door means nothing to weary sick

riverman. The name of the service does not appear on the bulletin board of the building. The medical officer in charge was advised to write to the custodian of the building and also to post sign "Marine Hospital Office" under the sign "Public Health Service."

(31) Floor Space.

Total net floor space in hospital building:

" " " " "	Basement	5,529 square feet;
" " " " "	First floor	4,148 " "
" " " " "	Second floor	4,252 " "
" " " " "	Third floor	4,520 " "
		18,449 " "
	Total net hall space	4,377 " "
	Total	22,826 " "

The total net floor space for hospital purposes is ---56%
" " " " " " quarters (except hall space) is----------25%
" " " " " " hall space (including quarters) is------19%
100%.

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 34 beds, maximum 39.

On a normal basis each patient has 100 square feet of floor area and 1130 cubic feet of air space.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal year 1909, 1913 and 1914 and also from the period from July 1st to November 30th for the calendar years 1913 and 1914.

	Fiscal Years			July 1st to Nov. 30th.	
	1909	1913	1914	1913	1914
Number days hospital relief furnished	6753	6353	5960	2053	2368
Daily average hospital patients	18.5	17.4	16.4		
Total daily cost per hospital patient		$2.82	$2.89		
Number of hospital patients	214	278	232		
Number of outside patients	676	759	486		
Number times treated	1255	1383	956		

On December 12th there were twelve patients of whom two were chronics, tubercular patients one. Of the twelve patients six were colored and six white. For the past twenty years the approximate maximum daily number of patients was 30 to 35. The minimum number was six. The year of largest demand was 1904, when 6977 days of hospital relief were furnished. In 1894 the relief furnished fell to 5000 days which probably represents the minimum demand in recent years. The relief furnished in 1914 was 6% less than in 1913 and 12% less than in 1909. For the first five months of the present fiscal year is has increased 15% over the same period of last year. The number of out patients in 1914 was 31% less than in 1913, which is explained by the removal of the out patient office from the water

front to the Custom House.

(34) Ambulance Service.

The station has a one-horse ambulance which takes care of the service. Only seventeen calls in the last fiscal year. Facilities satisfactory.

(35) Heating, Power Plant and Ventilation.

The buildingsNo. 1 and 2 are adequately heated from a direct steam heating plant located in the basement of building No. 1 through cast-iron radiators, having a gravity return system, and is in good condition except as to smoke stack which has rusted to a dangerous extent. Steam is supplied by two return tubular boilers in standard brick settings. The only power used is from a 15-horsepower vertical, five-tube, boiler for laundry washers and steam dry room. This boiler is located in the basement of building No. 1 beside the heating boilers and connects to the same smoke stack. Is ample and in good condition. Ventilation of wards is through ceiling ventilators to roof and from registers to vent stack. Other rooms by local chimneys; fire places, and windows and doors, and is ample and efficient.

(36) Illumination.

The buildings are lighted by electric lights, with single drop fixtures in wards and three or four drop fixtures in living quarters, and is ample and adequate under present needs only. Should building be modernized new fixtures should be installed in wards, which could be done cheaply using the same pendants with new globes.

(37) Decoration.

The decoration of building No. 1 is ancient and very unsatisfactory; if structure is continued redecoration should be done. Building No. 2 has no decoration; in the attendants quarters. Walls should be painted.

(38) Telephone and Call System.

Station has one city telephone in hospital and one in city office (Home Telephone Company). Hospital telephone has extension in Surgeon's quarters. There is one intercommunicating system of twelve stations connecting the various parts of the main building and the out buildings. It is old and worn out. If station is continued a new installation is required. There are no call bells or annunciators. The station has a portable watchman's clock system.

(39) Ice and Refrigerating Facilities.

Artificial ice is supplied to ice boxes as needed which is satisfactory. No refrigerating system is required.

(40) Water Supply and Fire Protection.

Water is obtained from 4-inch city main on High Street through 3-inch connection to main building with branches from this building to stable and laundry. There are no fire hydrants on the reservation but there are two city fire hydrants on 22nd Street on the east boundary of the reservation. The source of the supply is the Ohio River which is filtered by the city. Quality good; quantity ample; pressure 70 pounds. There are two old brick cisterns which are abandoned although certain downspouts are still connected to them. There are five hose racks each with 100 feet of 1½-inch linen hose and nozzle in main building; one in basement and one on each floor including the attic. There are thirteen chemical fire extinguishers, well distributed.

[illegible]

(18) [illegible]

[illegible]

(19) [illegible]

[illegible]

(20) [illegible]

[illegible]

(21) [illegible]

[illegible]

(22) [illegible]

[illegible]

(23) [illegible]

[illegible]

(24) [illegible]

[illegible]

(25) [illegible]

[illegible]

(26) [illegible]

[illegible]

(27) [illegible]

[illegible]

(28) [illegible]

[illegible]

(29) [illegible]

[illegible]

(30) [illegible]

[illegible]

City fire engine house is two blocks away. Facilities adequate.

(41) Fire Alarm System.
The station has a fire bell in front of main building which is struck by hand. Drills are held weekly. City fire pull box directly in front of main building on High Street. Facilities adequate.

(42) Sewer and Other Drainage.
Storm water and sewage is taken care of in a combined system discharging into large concrete city sewer 200 feet beyond High Street through 14-inch vitrified pipe. The Government sewer runs for 200 feet across private property on north side of High Street. There is said to be a brick sewer running from drain of main building to city sewer on Portland Street, but no data in regard to it is available. Branches connect the various buildings. Certain downspouts connect to two old cisterns. Condition of system good and facilities adequate.

(43) Streets, Roads, Walks, Fences and Grounds.
A macadam driveway without curbs leads from entrances on Portland and on 22nd Street to main building. Condition good and adequate.

Cement walks lead to and around main building from entrances on High and Portland Streets. There are cement street sidewalks surrounding the property, on High Street, 22nd and 23rd Streets and a brick sidewalk on Portland Avenue. All in good condition and adequate.

The entire reservation except for a short distance on 23rd Street where stable wall abutts on street is enclosed by an ornamental cast-iron picket fence with cast-iron posts. There is a driveway entrance on 23rd Street and Portland Avenue, and a pedestrians' entrance on the latter street and High Street on which the main building fronts. All entrances have ornamental iron gates. There is a wire fence with wood posts enclosing a space around stable. All fences in good condition and adequate.

The grounds are spacious and more extensive than are required for the needs of the station. They are well kept and present a pleasing appearance. There are no ground lights, rendering access to the buildings difficult at night and no suitable signs to direct visitors. Rear of building now fronts on the main street.

(44) Wharves, Etc.
None; no waterfront.

(45) Livestock, Etc.
There is one horse; one single horse ambulance; one ambulance wagon; one light freight wagon; one dump cart; and two horse lawn mowers. The tires of the ambulance wagon are in bad condition and minor repairs are needed to the lawn mowers. Other equipment is in good condition.

(46) Personnel.
Attached to this station there is one surgeon (absent on special duty); one assistant surgeon; one acting assistant surgeon (on duty in the office of the service in the Custom House); one pharmacist; and eleven attendants classed as follows:- One engineer; one cook, two nurses; one messenger; one laundryman; one driver; and one hallman. All of the attendants reside in the station with the exception of the engineer who goes to his home near the hospital each night.

[illegible]

[illegible]

[illegible]

(47) Records.

The records are properly kept, except the clerical records which are brief and incomplete. On account of the large amount of coal dust or smoke in the surrounding atmosphere it is difficult to keep books and records clean and in good order.

(48) Books.

The medical books in the station are mostly old and anitquated. A new dictionary is badly needed to replace an old one worn out.

(49) Purchase of Supplies.

Supplies are purchased on yearly contract, except eggs which are bought in the open market as needed. This is done on account of the high price of eggs in the yearly proposals submitted. Purchase of three months accepted proposals would have a few advantages in the purchase of articles which fluctuate in value but not otherwise. Purchase in open market would result in cheaper vegetables, eggs, etc.

APPENDIX A.

Marine Hospital at Louisville, Ky.

Appropriation for Repairs & Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
18	Changes in operating room to supply surgical dressing room to sketch	$500.00
37	Painting entire interior of building No. 1	2000.00
37-	Painting walls and ceiling of attendants' quarters in building No. 2	60.00
38	Telephone system	1000.00
		$3560.00

all but 38 completed 1910.

APPENDIX B.

Marine Hospital at Louisville, Ky.

Appropriation for Mechanical & Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
26	Kitchen sink in Surgeon's quarters No. 36 MEMLE	$ 60.00
26	Kitchen sink in pharmacist's quarters No. 45 H. P.	60.00
35	New smoke stack for boilers	200.00
		$310.00

APPENDIX D.

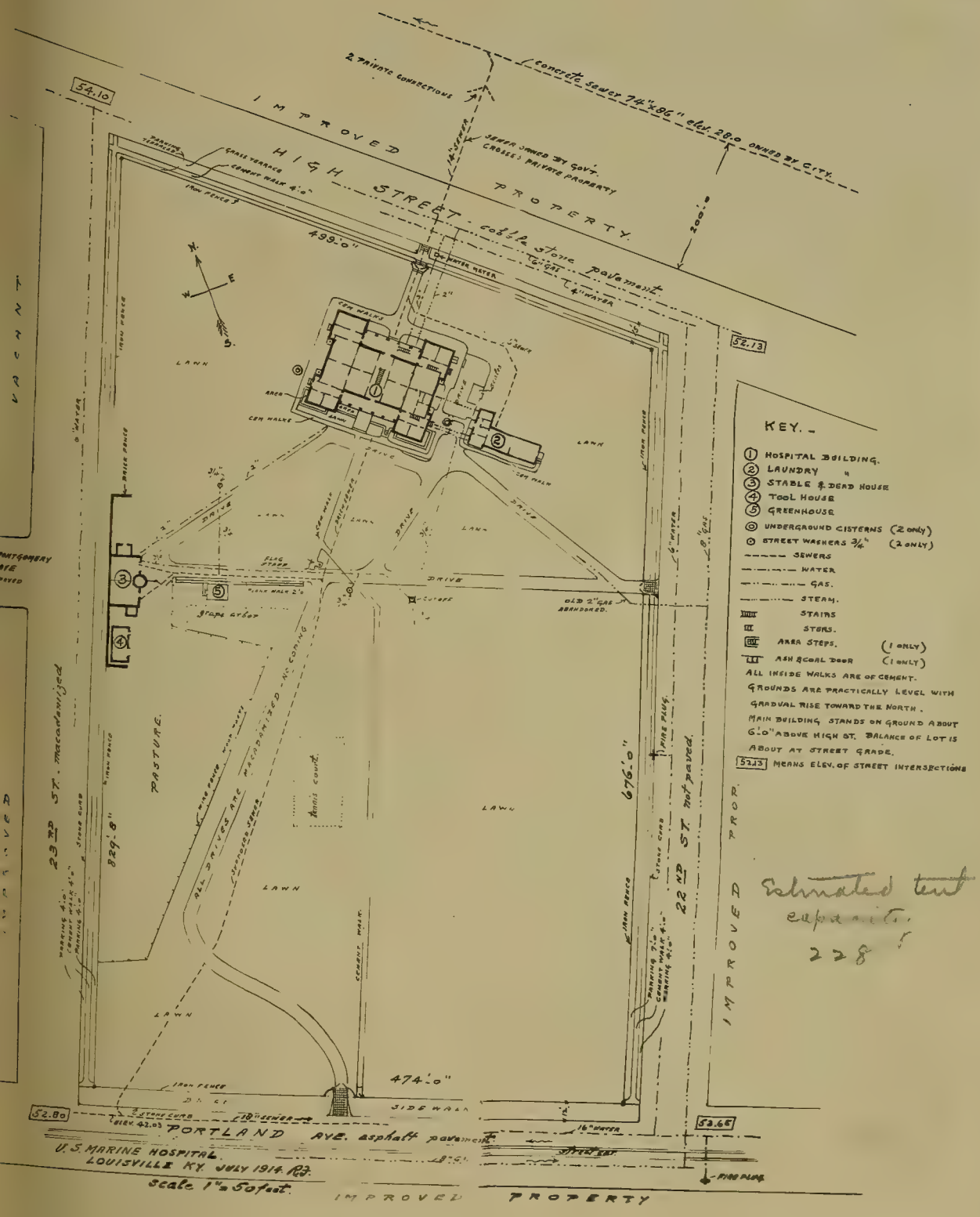
Marine Hospital at Louisville, Ky

Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of Report	ITEMS	Estimated Cost.
8	Officers (Hospital)	$35.50
22	Wards	275.00
16-	Operating Room	185.00
21	Dispensary	15.00
20	Laboratory	25.00
5	Kitchen and diet kitchen	86.00
10	Dining rooms	150.00
8	Officers quarters	53.00
9	Attendants' quarters	146.00
	TOTAL.....	$1010.50

Above not necessary if hospital is closed.


IMPROVED HIGH STREET PROPERTY
cobble stone pavement
Concrete sewer 74"x86" elev. 28.0 owned by City
2 private connections
Sewer owned by Gov't. crosses private property
200'
54.10
52.13
52.80
52.65
499'-0"
676'-0"
474'-0"
829'-0"
LAWN
PASTURE
DRIVE
23RD ST. macadamized
22ND ST. not paved
IMPROVED PROP.
IMPROVED PROPERTY
PORTLAND AVE. asphalt pavement
U.S. MARINE HOSPITAL
LOUISVILLE KY. JULY 1914.
Scale 1" = 50 feet.
KEY.
1 HOSPITAL BUILDING.
2 LAUNDRY "
3 STABLE & DEAD HOUSE
4 TOOL HOUSE
5 GREENHOUSE
UNDERGROUND CISTERNS (2 ONLY)
STREET WASHERS 3¼" (2 ONLY)
SEWERS
WATER
GAS.
STEAM.
STAIRS
STEPS.
AREA STEPS. (1 ONLY)
ASH & COAL DOOR (1 ONLY)
ALL INSIDE WALKS ARE OF CEMENT.
GROUNDS ARE PRACTICALLY LEVEL WITH GRADUAL RISE TOWARD THE NORTH.
MAIN BUILDING STANDS ON GROUND ABOUT 6'-0" ABOVE HIGH ST. BALANCE OF LOT IS ABOUT AT STREET GRADE.
52.13 MEANS ELEV. OF STREET INTERSECTIONS
Estimated tent capacity 228

ENTRANCE GATE PORTLAND STREET

GROUNDS FROM PORTLAND STREET

GROUNDS FROM PORTLAND STREET

GROUNDS FROM SOUTHWEST

HOSPITAL BUILDING (FRONT)

HOSPITAL BUILDING (REAR)

HOSPITAL BUILDING (FRONT)

GROUNDS FROM NORTHEAST

HOSPITAL BUILDING (NORTH)

HOSPITAL BUILDING SOUTHEAST

STATION & GROUNDS

STABLE GREENHOUSE & TOOL HOUSE

LAUNDRY BUILDING

LAUNDRY BUILDING

STABLE & TOOL HOUSE

GENERAL VIEW FROM NORTHWEST

JTC

October 12, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Louisville, Ky., with the exception of the closing of the hospital, which should, I believe, be postponed until it is ascertained if the building should be kept open in order that laboratory studies relating to public health work may be made there.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

MEMPHIS, TENNESSEE.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

U. S. MARINE HOSPITAL, MEMPHIS, TENN.

Report of inspection made December, 1914, with recommendations as to policy to be pursued.

I
GENERAL CONSIDERATIONS.

(1) Location.

The Marine Hospital Reservation at Memphis, Tenn., is situated on a high bluff on the east side of the Mississippi River overlooking that stream and the bottom lands of Arkansas on the west side. The reservation consists of about 4½ acres of level surface with a deep ravine on the south extending partly into the property. A steep bluff on the west and northern sides, on the west bank or boundary the ground is irregular and weather worn, on the north side it is graded to a steep pitch and sodded. The reservation is bounded on the north by Illinois Street, on the south by California Street, on the east by Armstrong or Minnesota Street and on the west by the bank of the Mississippi River. A substantial brick and iron fence incloses the reservation on the south and east and a barbed wire fence on the north and partly on the south.

The reservation adjoins Jackson Mound or De Soto Park, is beautifully situated about sixty feet above the river and commands plenty of fresh air and sunshine. The grounds are well kept, well turfed with Bermuda grass and contain a number of fine trees and shrubs.

There are no sidewalks adjoining the property.

The buildings consist of a pavilion group made up of a central Executive brick building, two-stories and basement, connected by corridor with two one-story hard brick base and wood superstructure and a brick laundry and kitchen building of two stories and basement.

Detached buildings are a one story wood building with brick basement used as a Surgeon's Quarters, placed to the west of the pavilion group near the bluff overlooking the river, a stable, carriage and necropsy building of wood, and one story building with loft erected in the southeast corner and a frame carpenter shop of one story to the northeast of the laundry building. Adjoining the carpenter shop is an old tank building used as a room for unserviceable property.

(2) History.

Relief was extended to sick and disabled seamen at the port of Memphis, in May, 1870, the patients being cared for at the Memphis City Hospital and the medical attendance furnished by a local physician, as acting assistant surgeon. On August 22, 1882, the first regular officer of the service was detailed for duty in Memphis, with an office in the Custom House, and the patients of the service requiring hospital relief were sent to the Memphis City Hospital until the opening of the U. S. Marine Hospital on March 31st, 1884.

H. M. Naval Dockyard, Sydney, N.S.W.

Report of Inspection made December, 1914, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(a) Location.

The Sydney Hospital Commission of Benevolent, Home, is situated in a city unsuited on its great size of the Metropolitan Water Conservation and the Sydney Lands of Commerce on the small site. The Commission holds about 4½ acres of level surface with a long series of the public buildings partly into the property. A strong blaff on the east and southern sides, so the most that or Commission the ground is irregular and neither sunny, on the north side it is ground to a steep grass and gardens. The precipitous is bounded on the south by Liverpool Street, on the north by Bathurst Street, on the east by Harrying or Kingsway Street and on the west by the back of the Kingsway's Street. A substantial brick and iron fence encloses the property on the south. A substantial brick and iron fence encloses the property on the south.

The Conservation objects Commission Board or in Sydney Water, is seriously interested about study that close the water and economic quality of lines and sewerage. The grounds are well kept, well turned with Bermuda grass and contain a number of fine trees and shrubs.

There are no allowances adjoining the property.

The buildings consists of a pavilion type each by of a central Commission Lodge building, two-storeys and basement, connected by covered ways and two-story high wards and some outpatients are a brick Commission and stores building at the stores and basement.

The most buildings are a one story wood building with brick basement and as a Surgeon's Quarters, placed on the most of the pavilion great water the small overlooking the river, a chapel, matrons and nurses building of wood, and one story building with light wooden attached to the outbuilding which and a large corporation shop of the power to the workmen of the Sydney building. Adjoining the corporation shop is an old wood building used as a room for unsaleable property.

(b) Climate.

Sydney was operated on air and Climate season at the part of Sydney. In May, 1877, the pilgrim ship carrying the of the Marine Sick Hospital and the medical attendants provided by a Local physician, on Sydney measures. On August 5th, 1877, the first regular officer of the service was detailed for duty in Sydney, with an office in the Custom House, and the position of the service Medical Hospital with part of the Sydney Hospital Control with the service on the H. M. Dockyard on Sydney Port.

In 1880 an appropriation was made by Congress of $30,000.00 for the purchase of a site and construction of a small hospital at Memphis. A site was chosen in 1881, in what was called "Fort Pickens Addition" (Blocks B and C) now called Jackson Mound Park or De Soto Park, on the east bank of the Mississippi River and distant from the centre of Memphis about two and one half miles. The land chosen was about 4½ acres in extent, and the cost was about $4,725.00. Much delay was caused in obtaining the necessary surrender from the State of Tennessee to the United States. As the balance of the appropriation left after purchase of the land was insufficient to build the hospital, an appropriation of $30,000.00 was added in 1883.

The hospital was completed in January 1884, at a cost of $33,775.00, was furnished and opened for the reception of patients on March 31st, 1884.

(3) Need for a Marine Hospital.

The hospital relief furnished is diminishing year by year. In 1914 it was 30% less than in 1913, and 35% less than in 1909, while for the first five months of the present fiscal year it was 24% less than for the same period in 1914. The average daily number of hospital patients for 1914 was 13.1 as compared with 19.8 in 1909.

With marine hospitals at St. Louis, Evansville and New Orleans it is believed that conditions do not warrant the continuation of the marine hospital at Memphis.

(4) Adequacy of Plant.

The present pavilion hospital is old and the buildings are in bad repair. The location is undesirable as it is too far from the center of the shipping interests, and not in a good section of the city.

The applicants for relief at Memphis are diminishing from year to year, and the maintenance of a hospital for the relief of river men at this point does not seem a necessity, and it is recommended that it be closed. Local arrangements can be made for the care of acute and emergency cases, and those requiring continued treatment can be transferred to the Marine Hospital at St. Louis, Mo.

(5) Acquisition or Disposal of Land.

The reservation should be retained as a possible center or base for public health work. It contains 4½ acres and is estimated to be worth $35,000.00, exclusive of buildings. The buildings are valuable for salvage only and estimated to be worth $5,000.00.

(6) Future Development or Disposal of Plant.

As recommended under Paragraph 4, Marine Hospital at Memphis should be closed and the property retained for the reason given in Paragraph 5.

I I
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * * * *

(1) Appropriation for Repairs and Preservation of Public Buildings
(for details see appendix A)
Total estimated cost of work recommended, $2,535.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended, 50.00

(3) Legislative Appropriation for New Construction
(for details see appendix C)
Total estimated cost of work recommended,

(4) Appropriations for Administrative Equipment
(for details see appendix E)
Total estimated cost of items recommended, 2,281.00

T O T A L $4,866.00

(5) Personnel.

Adequate.

I I I
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, Administrative Building. Two story and basement, brick superstructure, painted. Tin roof. Operating and wash-up toilet rooms have porcelain tile floor and wainscot. All other floors are 3¼" D & M hard pine. Plaster walls and ceilings, painted. Basement has cement floor but no interior finish. Steam heat. Gas and Electric light. Floor area 4680 square feet.

Building No. 2, Attendants' Quarters, Laundry, etc. Two story and English basement. Brick superstructure. Tin roof. Veranda four sides of first story. Basement has cement floors, plastered walls and ceilings cement base. Pine trim, painted. All rooms above basement have plastered walls and ceilings, painted. Pine base and trim, painted. Porcelain tile floor and base in toilet room second story. All other floors are 3¼" D & M hard pine. Steam heat. Gas and electric light. Floor area 4440 square feet.

Buildings Nos. 3 & 4. Hospital Wards. One story wood frame on brick piers. Clap-board exterior, Shingle roof. Ward rooms have plastered walls and open truss roof. All other rooms have plastered walls and ceilings. All plaster work is painted. Pine base and trim, painted. Toilet rooms have porcelain tile floors and base. All other floor 3¼" D & M pine. Steam heat, electric lights. Floor area 3580 square feet for each building.

Building No. 5. Surgeon's Quarters, One story wood frame on abrick basement, cement floor in basement, wood floors elsewhere are of hard pine.

[illegible]

(1) [illegible] for repairs and improvements of public buildings (for details see appendix A)
Total estimated cost of work recommended, £4,[illegible]

(2) Appropriations for maintenance and miscellaneous expenditure of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended, £0,00

(3) Improvements [illegible] for Sanitary purposes (for details see appendix C)
Total estimated cost of work recommended, £[illegible]

(4) Appropriations for industrial [illegible] (for details see appendix E)
Total estimated cost of items recommended, £[illegible]

T O T A L £[illegible]

(1) Summary.

Appendix.

[illegible]

(1) Buildings in Lusaka.

Building No. 1. Administrative Building. The entry and Summary. Well [illegible]. Ground floor. Ground and working [illegible] rooms have provision air flow and windows. All other floors are of R & B [illegible]. Plaster walls and ceilings. Concrete floor on [illegible] floor for [illegible]. Floor area [illegible] square feet.

Building No. 2. Principal Executive Officer, Lusaka. The main [illegible] Summary. Well proportioned. The roof. Concrete floor [illegible] of first story. Provided for proper ventilation walls and ceilings [illegible]. Floor area [illegible] square feet.

Building No. 3 a. Special Store. One story wood frame on brick piers. Corrugated [illegible]. Single roof. Roof [illegible] walls and open [illegible]. All other rooms have plastered walls and ceilings. All floors [illegible]. Other rooms have provision air flow and windows. All floors of R & B plus [illegible] and [illegible]. Floor area [illegible] square feet and well ventilated.

Building No. 3. Government Garage. One story wood frame on brick [illegible]. Corrugated [illegible]. Single roof. Roof [illegible] walls and open [illegible]. All other rooms have plastered walls and ceilings. All floors [illegible]. Other rooms have provision air flow and windows. All floors of R & B plus [illegible] and [illegible]. Floor area [illegible] square feet and well ventilated.

Pine base and trim, painted. Plastered walls and ceilings, painted. Shingled roof. Heated by local hot water plant, which is inadequate. Revising tank connections may improve circulation, but larger heater seems necessary. Building in poor condition generally.

Building No. 6, Stable and Necropsy. One story wood frame, on brick piers. Clap-board exterior and shingle roof. Necropsy room has plastered walls and ceiling painted. Stable has no interior finish except harness room, which has D & M partitions and trim, unpainted. 12" plank floors, left over stables. Has plank floor. No interior finish. No heat. Electric light. Floor area 920 square feet.

Building No. 7, Carpenter shop, is a one story wood frame. No basement-Shingle roof. No interior finish or paint. No heat. no light. Floor area 550 square feet.

Building No. 8, is a junk room for underviceable property, One story wood frame shed. Paper roof. Should be discontinued and the unserviceable property should be stored in part of carpenter shop, if plant is continued. An extension thereto may be necessary. No heat, no light, Floor area 150 square feet.

(2) Offices.

Surgeon's. Located on west side of first floor of executive Building. It is a good sized room and fairly furnished. A new desk and revolving chair is needed.

Pharmacist's. Opposite Surgeon's office on first floor of Executive Building, suitable for the purpose and adequately furnished.

(3) Visitors' Reception Room.

No special room. Corridor of executive building used for this purpose.

(4) Examining Room.

No special room for this purpose. Examinations of patients made in Surgeon's and Pharmacist's offices, in the surgical dressing room and in the wards.

(5) Kitchen and Diet Kitchen.

The main kitchen is located in northeast corner of first floor of laundry building, has a coal and a gas range and a fair equipment. No steam table. A dish washing machine is needed.

Diet Kitchen.

None. Food carried to wards in trays from the kitchen. No special means of heating food for bedridden patients.

(6) Pantry and Food Storage.

A large pantry adjoins the kitchen on the first floor of the laundry building, between it and the dining room, It is used for the storage of utensils and kitchen supplies.

Pine floor and trim, painted. Plastered walls and ceilings painted. Tile-lined roof. Heated by local hot water plant, and by steam radiators. Lighting and power connections for laundry equipment, and larger laundry machinery. Building is quite substantially constructed.

Building No. 5, Table and Storeroom. One story red brick, on pile piers. Clay-tiled exterior and adjacent roof. Storeroom from the building walls and ceiling painted. Table has no distinctive finish, merely serviceable. Room, about 5 x 8 partitioned and lined. 1" pine floor. Lots over exterior. No good floor. No interior finish. No heat. Electric light. Floor area 80 square feet.

Building No. 7, Carpenter Shop. In a row along road frontage. No interior finish or paint. No heat. No light. Floor area 120 square feet.

Building No. 8, is a joint room for maintenance personnel. One story red frame shed. Tar-paper roof. Small to floorboard and lathed partition. Lots property should be moved in view of improved site, it cannot be removed. No electric energy nor no heat. No heat, no light. Floor area 130 square feet.

(5) Offices.

Surgeon's. Located on east side of first floor of Quarantine Building. It is a real school room for Public Health. A few desks and tables quite is needed.

Commercial. Surgeon's office is first floor of Quarantine Building, adjacent to the Surgeon and adequately furnished.

(6) Kitchens, Mess Halls Etc.

In general good. Quarter of possibly Medical Staff in the Surgeon.

(7) Laundry Plant.

No special from the this purpose. Transportation of patients made to Surgeon's and Commissary's offices, in the authors interesting work and in the world.

(8) Heating and Hot Water Plant.

The main system is located in quarantine building (Main Floor of Quarantine Building) has a coal and a gas fuel and a duty-type plant. No steam traps. A water service machine is needed.

Gas Plant.

None. Gas service to serve in force from the Gasoline. No special mains or heating lines for hospital patients.

(9) Sewage and Food Storage.

A large pantry adjoins the kitchen on the first floor of the Quarantine Building, between it and the sewage yard. It is used for the storage of vegetable and kitchen supplies.

A small closet in the kitchen is used for kitchen supplies and also a refrigerator in the dining room.

(7) Store Rooms.

Store rooms for medicine, hospital supplies, glass-ware and unserviceable property are located in the basement of the executive building, Unserviceable property are located in the basement of the executive building. Unserviceable property is stored in the old watertower building to the rear of the east ward and laundry building.

(8) Quarters for Officers.

Surgeon's quarters located in a one story and basement frame building in the northwestern part of the reservation, consists of 1 parlor, 1 library, 1 dining room, 4 beds rooms, 1 kitchen, 1 bath room, and 1 furnace room.

The kitchen and dining room are located in the basement.

Repairs to these quarters are now going on (papering and painting). They are comfortable and adequately furnished, except that kitchen utensils and dishes are needed.

Pharmacist's Quarters.

Located on the upper story of the Executive Building, consist of five rooms, sitting room, dining room, bath room, two bedrooms, and kitchen.

One room in the northwest corner is reserved for the use of an acting assistant surgeon.

The Pharmacist's quarters are comfortably furnished. New window shades are needed.

(9) Quarters for Attendants.

Seven attendants have quarters on the second floor of the laundry building and two nurses are lodged in the west or colored ward, one in the patients' smoking and recreation room, and one in the nurses room in the north end.

The nurse occupying the recreation room should be moved elsewhere and the room assigned to its former purpose.

One wardrobe is needed for the quarters. Furniture otherwise adequate.

(10) Patients Dining Room.

There is a general dining room located next to the kitchen on the first floor of the laundry building, used for patients and attendants, who eat at separate tables and at different times.

The dining rooms originally designed in the layout of the hospital, have been diverted to other purposes.

(11) Interns and Officers Dining Rooms.

None.

[illegible] [illegible] [illegible] [

(12) Attendants' Dining Room.

Located in general dining room on first floor of Executive Building. Equipment adequate. New tables needed to replace old ones.

(13) Recreation and Smoking Rooms.

There are no rooms set apart for this purpose. Smoking is allowed in the wards and the patients use the wards and the adjoining porches when weather permits for recreation purposes. The rooms originally designed for smoking and recreation at the ends of the wards, are now used, one as a storeroom and the other as a nurses room.

This arrangement should be discontinued and the rooms once more used for recreation and smoking rooms.

(14) Disinfecting Facilities.

There is no steam disinfector for bedding, though such an one is needed and could be installed in one side of the Carpenter shop. Steam for it could be supplied from high pressure laundry boiler in building #2, nearby.

(15) Incinerators.

There is a home-made incinerator in the yard which takes care of infected bandages, etc., this is an open kettle with a brick fire box underneath and a stack of 6 inch diameter by about 4 feet high. The apparatus is located near the Carpenter shop. A water jacketed incinerator should be installed in the closet room of one of the ward buildings, which was originally designed for local hot water heater.

(16) Disposal of Soiled Linen.

Removed from wards and rooms and placed in sanitary hampers on the ward porches. Infected linen is soaked in formaldehyde solution before being taken to the laundry.

There is no steam sterilizer for clothing or bedding at the station.

(17) Laundry Facilities.

The laundry is located in the basement of building #2, and is adequate in size and in good condition, except that a new mangle is needed.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room, located in northwest corner of first floor of Executive building, it is a good sized room, with tile floor and wainscot, well lighted and fairly equipped.

There is no special wash-up or etherizing room, and the sinks are located in the operating room. Etherization is done on the operating table. There are not many operations performed at this station. The sterilizer for dressings is located in the basement of the Executive Building and there is no instrument sterilizer. Instruments are boiled on the kitchen stove in an instrument tray when required for operation. A wash-up and etherizing room could be made by partitioning off a portion of the dispensary, which

(12) Attendants' Locker Room.

Located in ground floor room on first floor of Laundry Building. Equipped accordingly. Has toilet rooms in rear of the room.

(13) Partitions and Locker Rooms.

There are no rooms set apart for this purpose. Usually is almost in the wards and the patients use the wards and the adjoining private rooms. Partly for recreation purposes. The visual orthopedic hospital for medical and surgical of the body of the wards, are now used, but as a dormitory the floor as a recreation room.

This arrangement should be discontinued and the rooms used only for recreation and meeting rooms.

(14) Laundry Facilities.

There is no steam laundry for the hospital, which work of the is needed and could be installed in the cellar of the Dispensary room. Then for it would be supplied from the pressure boiler below in building 80, another.

(15) Laundry.

There is a separate laundry operation in the rear which room of isolated buildings, etc., this is on some details with a total the laundry and a stock of a line elevator by about a foot high. The laundry is located near the Dispensary room. A water jacketed washwater should be installed in the closet room of one of the wards buildings, which was artificially separated the local hot water heater.

(16) Storage of Soiled Linen.

Removed from wards and room and closed in sanitary hospital at the same period. Soiled linen is stored in laundry buildings before being taken to the laundry.

There is no room available for sterilizing or boiling at the stations.

(17) Laundry Facilities.

The laundry is located in the basement of building 80, and is adequate to wide and in good condition, except that a new boiler is needed.

(18) Operating and Surgical Theatre Room Facilities.

Operating Room, located on northeast corner of first floor of Dispensary building, it is a good room, with this lines and natural, well lighted and fairly equipped.

There is no special washing of sterilizers room, but the sinks are located in the operating room. Sterilization is done in the operating building. There are not many operations performed at this building. The sterilizer for dressings is located in the basement of the Dispensary Building and there is no instrument sterilizer. Instruments are boiled on the kitchen stove in an instrument boiler when required for operations. A washing and sterilizing room could be made to serve all + patients of the dispensary, which

is a good sized room, and an instrument sterilizer should be furnished and installed in this room. A thermo-cautery is also required.

Surgical Dressing Room. located in one of the small rooms in the east ward. It has a table and some old wooden lockers and shelving which should be replaced with a sanitary dressing and instrument cabinet.

(19) X-Ray Facilities.

None. There is an old Otis Clapp Static machine on the station and now stored in one of the old dining rooms at the end of the east ward. It has not been used in ten years. X-Ray work is done under contract in Memphis when necessary at prices from $5.00 to $7.00 for each case, and no outfit is needed at this station.

(20) Laboratory.

There is no room for this purpose. A table and a few shelves in the northeast corner of the Dispensary answers for this purpose. There is also a Zeiss microscope, a centrifuge, stains, etc. Ordinary clinical work on urine, sputum, etc., is done here. Special work would have to go to the Hygienic Laboratory.

(21) Dispensary.

Located on first floor of the Executive Building, opposite the operating room. It is a good sized room, and does not need anything in the way of equipment, except a suppository machine.

(22) Wards for Seamen.

There are two pavilion ward buildings each with a main ward with a normal bed capacity of 12, maximum 16.

Both wards are open on the sides, with verandas 6 feet wide. There is no ceiling in either ward.

One ward is used for colored and one for white patients.

In the east ward building there are two small rooms and one larger room reserved for ward purposes with a total normal capacity of seven patients.

A room 33 x 14 in east ward building is now used as a storeroom. If store space were provided elsewhere, this room would accommodate 4 to 5 beds.

(23) Quiet Wards.

There are no wards specifically assigned for this purpose but the two small unoccupied rooms in the west ward building are available for this purpose.

(24) Wards for Revenue Cutter Officers.

There are none provided and none are needed.

In a good class room, old or laboratory furniture should be furnished and installed in this room. A teacher-demonstrator is also required.

Storage & Dressing Room. Located in one of the small rooms in the room. It has a tiny and some old wooden lockers and dirtying which should be replaced with a modern dressing and laboratory cabinet.

(ii) Lecture Demonstration.

Room. There is in all this study Biology-Physics-Chemistry with a stored-lecture-of the old fixed tiers of the and of the most part. It has not been used in two years. Lecture room is also used instead in this room. Its is realize of this question.

(iii) Laboratory.

There is no regular lab purpose. A table and a few photos in the northwest corner of the diagonally numbers for the purpose. There is also a Bakie microscope, a centrifuge, models, etc. Technical clinical work on urine, sputum, etc., is done here. Special work would have to go to the Biology Laboratory.

(iv) Library.

Located on first floor of the Technical Building directly adjacent the lecture room. It is a good size room, but there are many matters in the way of equipment, except a storage-cabinet.

(v) Media for Health.

There are two portable movie projectors and a film work well, y some of but depends of the weather.

Wall charts are open on the walls, with varnished 1 foot wide. There is no cabinet in either ward.

One room is used for mixed and one for male patients.

In the ward not building there are two small rooms and two Junior rooms reserved for more patients with a total normal capacity of about patients.

A room 32 x 16 in ward building is now used as a dispensary. It also from more private consults. This room should accommodate 5 to 7 beds.

(vi) Guest Rooms.

There are no guest specifically assigned for this purpose but the small unassigned rooms in the main ward building are available for this purpose.

(vii) Media for Personal Health Education.

There are none provided and none are needed.

(25) Toilet Facilities.

Are ample and in good condition, except that a modern surgical instru- and wash-up sink should be placed in the operating room and one in the surgical dressing room.

There are no separate accommodations for syphilitics but under present conditions none are necessary.

(26) Portable tubs.

There is one old zinc lined tub without rack, Typhoid cases are rare in Memphis and it is not often needed.

(27) Paded Cells.

No rooms for violent alcoholics or insane. There is an old Humane Restraint Apparatus at the station consisting of jacket, wristlets and anklets and aside from this, the station would have to depend on the city authorities to remove the case, until arrangements could be made for its reception at an asylum.

(28) Necropsy Facilities.

Ample necropsy facilities are provided in a room in the barn and are adequate.

(29) Isolation Facilities.

There is no special building provided for this purpose. Contageous cases are sent to the City hospital, suspect cases are isolated in one of the small rooms in the wards.

Facilities are adequate for present needs.

(30) Out-patient Office.

At Hospital. Appliance for Special Examination needed.

(31) Floor Space.

In the hospital group proper, namely, the Executive Building, the two pavilion wards and the attendants building, the total net floor space is as follow:

Basement, (Executive and Attendants building only.	2670	square feet.
First Floor.	9035	" "
Second Floor.	2580	" "
	14285	" "
Total Hall Space.	1995	" "
Total.	16280	" "

In this group

The total net floor space for hospital uses is	68%
" " " " " " Quarters (except hall space)	20%
" " " " " " Hall space (including quarters	12%
	100%

(xxi) — Theatre Facilities.

Are medical and in your institution, except that a nature operated Institution and operating rooms should be planned in the necessary that can be the surgical and treatment room.

There are no separate conditions for epidemics but rather general conditions when are necessary.

(xxii) — Isolation Data.

There is one all wards (lower the ultimate wards). Hospital among the rooms in Hospital and it is not without wards.

(xxiii) — Ward Units.

No rooms for visitors accommodation at nurses. There is no separate Hospital Accommodation at the medical consultant treating medicines and tablet-based media from them. The medicine needs have to depend on the city medicines in rooms-to-rooms, until sterilization needs be made for the hospital when it is not medical.

(xxiv) — Nurses' Facilities.

Night nurses' facilities are provided in a room in the hospital and nurses.

(xxv) — Laboratory Facilities.

There is no medical facilities provided for this purpose. Therefore every pass in the city hospital. Samples sent are visited in one or two medical rooms in the wards.

Facilities are adequate for present needs.

(xxvi) — Out-patients Clinics.

No Clinics. - Clinics for Special Consultative medical.

(xxvii) — Clinic Floor.

In the hospital group rooms, medical the Consultant Building, the rooms particular-wards the out-patients building, the medicines floor rooms in no building.

Therefore, Elevators are necessary medicine wards.

Third Floor.	Wards	Not equipped
Second Floor.	"	"
	Lifts	"
	Wards	"
	Lifts	"
	Wards	"
	Lifts	"

Special Ward Floors.

Lifts.

In case group

The table for floors (with the hospital wards is.

"	"	"	"	"	Emergency (Ward) Ward	Not
"	"	"	"	"	Ward type (Consultant)	

The Surgeon has quarters in a separate building, devoted entirely to this purpose, Total floor space. 3,300 square feet.

(32) Bed Capacity and Space Allowed.

The total normal capacity is 35 beds, maximum 45.

On a normal basis each patient has 150 square feet of floor area and 2200 cubic feet of air space computed on a height of 15 feet to eaves. Wards are open to roof. If the stores now cared for in a room of the east ward were otherwise provided for space would be available for four more beds.

In an emergency a still larger number of patients can be accommodated as in this climate patients except in the severe winter months, can be cared for on the verandas.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the Fiscal years, 1909, 1913, and 1914, and also for the period from July 1st to November 30th, for the Calendar years 1913 and 1914.

	Fiscal Years			July 1 to Nov. 30th.	
	1909	1913	1914	1913	1914
Number days hospital relief furnished	7229	5934	4719	2343	1695
Daily average hospital patients	19.8	16.2	13.1		
Total daily cost per hospital patient	$2.11	2.58	4.31		
Number of hospital patients	727	569	299		
Number of out patients	1523	1059	869		
Number of times treated	2064	1559	1286		

On December 9th, there were 20 patients of whom two were chronics. Tubercular patients one. Of the 20 patients 10 were white and 10 colored. In the last five years the approximate maximum daily number in the hospital was 38, minimum 5.

The number of days hospital relief furnished in 1914 was 20% less than in 1913 and 35% less than in 1909. For the first five months of the present fiscal year it has been 24% less than for the same period of last year. The number of out-patients during 1914 was 42% less than for 1909.

(34) Ambulance Service.

The station has a one horse ambulance in fair condition, but owing to street grades, one horse is inadequate except for the high level traffic. Patients from river level are carried in station wagon, or otherwise in contract ambulance. Rate for contract ambulance $3.00 per trip.

(35) Heating, Power and Ventilation.

An ample heating plant is located in the basement of building #1, of direct steam radiation with C. I. and wrought iron colum radiators, gravity returns with tank and vacuum pump to boost circulation. The latter however

is never used or needed as a 5# pressure takes care of that, even in the coldest weather, the plant is adequate and in good condition. Power is supplied by an upright five tube boiler 15 HP to an O and P vertical slide valve Eng. of 10 HP for running laundr machinery and steam drying room. Ventilation is by natural draft through fire place flues and by windows and doors which is ample and satisfactory.

(36) Illumination.

All buildings are lighted by electric light, with single drops, wires run in exposed conduits. The illumination is adequate, though the fixtures are not modern.

(37) Decoration.

The decoration in the wards is satisfactory, except exposed rafters in wards should be painted a light color instead of dark red as at present. Decoration in other buildings is satisfactory for present use only.

(38) Telephone and Intercommunicating System.

There is one direct connected city telephone in Executive Building, Bell System. There is no station intercommunicating telephone system. A station line however connects Executive Building with Surgeon's Quarters. There is a three drop annunciator in Executive Building with push buttons in the two wards and kitchen.

Three push buttons in Executive Building also connect with separate bells in each ward and kitchen.

Equipment in good condition and adequate.

(39) Ice and Refrigerating Facilities.

Artificial Ice is supplies to ice boxes which are in good condition and adequate in size.

There is no refrigerating apparatus and none is considered necessary.

(40) Water Supply and Fire Protection.

Water is obtained from 4" city main on California Avenue, through 4" connection to Executive Building with branches to the various buildings.

There are two one way 2½ " fire-hydrants on reservation and two city hydrants on Delaware Street 400 feet distant. The source of the water supply is from artesian wells, and is of excellent quality. The quantity is ample and pressure about 40 pounds.

There is some complaint from iron in the water. This is probably due to pipe corrosion, as the analysis shows little if any iron.

There are 3 under-ground brick cisterns for rain water of which two have filter chambers.

The unfiltered rain water is used for laundry purposes and the filtered for drinking purposes. City supply is also used for drinking.

There is one wheeled hose reel with 300 feet of 2½" fire hose and nozzle.

Five hose reels with 50 to 100 feet of 1½" hose are located in the various buildings.

There are 3 chemical fire extinguishers of the three gallon Underwriter type one for each ward building and the executive building.

Six (6) additional chemical fire extinguishers are needed. Otherwise facilities are adequate.

(41) Fire Alarm System.

The station has fire bell in rear of Executive Building struck by hand. Drills are held weekly. City Fire Department engine house five blocks away.

There are no fire alarm boxes in this part of the city.

Facilities are adequate.

(42) Sewer and other Drains.

Strom water and sewerage is taken care of in a combined system discharging through 8" vitreous pipe into a private sewer in Illinois Street. This latter sewer empties into the river at the foot of the street.

Condition of system good and facilities adequate.

(43) Streets, Roads, Walks, Fences, and Grounds.

A gravel driveway leads from entrance on California Avenue to the various buildings. These roads were surfaced during the past summer with new gravel and sand. The top surface is loose, due to the lack of suitable bonding material. Clay should be added and the surface graded and rolled.

Although not a permanent type of construction the roads will suffice for present needs.

A masonry wall with stone coping surmounted by iron picket fence encloses the reservation on South Armstrong Street and on California Avenue as far as the ravine. In the ravine it is continued with a wire fence.

On West Illinois Avenue there is a wire fence with iron pipe posts on piles and cap log at foot of bluff. The fence returns a short distance along the west boundary. There is a driveway and pedestrian entrance on California Avenue.

In general the fences are in good condition and adequate.

A cement sidewalk leads from Executive Building to Surgeon's quarters and to California Avenue. In good condition.

There are a number of old brick walks about the building in fair con-

The multiplex rule water is used for laundry purposes and the filtered for domestic purposes. It is regular low water for building.

There is one electric deep well pump [illegible] 1" tile [illegible] level.

There does double duty as the fire at 1½" hose cart located in the main home building.

There are 2 gasoline lime extinguishers of the large pulmo tank-pump type one for each main building and the gymnasium building.

Six (6) additional chemical fire extinguishers are needed. Sufficient hand pails are adequate.

(42) Fire Alarm System.

The existing hand fire bell is near at Executive Building central by bell. Bells are heard easily. Site this department equipe [illegible]

There has no fire alarm house in this part of the city.

Facilities are adequate.

(43) Sewer and Water System.

Sewer water and sewerage is being made at in a modern metal lin[illegible] charging through 2" siphone pipe into a private water in Elkhart Branch. The latter sewer supplies the river at the best of the county.

Operation of sewer and facilities adequate.

(44) Streets, Roads, Walks, Drives and Bridges.

A gravel driveway leads from entrance to Institution drives to the main home building. These roads are surfaced during the most sewer with the gravel and sand. The lay surface is hence, due to the lack of adhesive binding material. They should be ballast and the surface repair are [illegible]

Although not a necessary type of construction the small bridge [illegible] for general use.

A masonry wall, with gates, [illegible] by the Pilot Lions Club, [illegible] the Institution on South Lexington Street and the Institution Drive [illegible] in this course is in [illegible] with a [illegible]

On East Illinois Avenue there is a site [illegible] are free play [illegible] [illegible] at least [illegible]. The Lions [illegible] a [illegible] [illegible] the [illegible]. There is a [illegible] [illegible] Institution [illegible].

It provides the finest [illegible] and [illegible].

A [illegible] from Executive Building to [illegible] [illegible] in Institution drives. In good condition.

There are a number of [illegible] [illegible] [illegible]

dition. A cement sidewalk is in process of construction on California Avenue from entrance to Executive Building to corner of reservation on South Armstrong Street. There is no cement sidewalk from this point to Delevan Street, the main thoroughfare from the city.

With the exception of the roads and the space in the vicinity of the stable where the turf is poor, the grounds are well kept and present a pleasing appearance.

(44) Wharves, Sea Walls, Etc.

None. The reservation does not extend to river.

(45) Live Stock, Vehicles, Etc.

There is one horse, one Dayton wagon, one one-horse ambulance, and one one horse lawn mower. Condition in general good. Facilities adequate.

(46) Personnel.

On duty in this station are 1 commissioned officer, 1 acting assistant surgeon, 1 pharmacist, and eleven attendants classed as follows. 1 engineer, 1 orderly, 1 driver, 1 wardman, 2 cooks, 2 nurses, 1 yardman, 1 laundress and 1 watchman.

The force seems sufficient for the needs of the station.

(47) Records.

The most of the clerical records are properly kept but the record of patients effects and the clinical histories are very brief and incomplete. The entries in the medical officer's journal are few and made at long intervals.

(48) Books.

The medical books in the station library, with the exception of three modern books, are mostly old and out of date.

(49) Purchase of Supplies.

Supplies are purchased in yearly contract for everything except forage, which is purchased in open market as no contract could be made for it. Three months accepted proposals would have the advantage of lower prices on groceries and meats, and purchase of supplies in the open market would effect some saving.

APPENDIX A.

Marine Hospital at Memphis Tenn.

Appropriation for Repairs & Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report	ITEMS	Estimated Cost.
	NOTE: All recommendations on this sheet are conditioned upon the continuance of this station as a Marine Hospital.	
14.	Fiting up room in Building No 7 for a Stearn sterilizer	$ 75.00
18.	Plastered partition in Dispensary to make etherizing room.	150.00
37.	Painting all interior plaster and trim of buildings Nos. 1, 2, 3, 4, 5, and necropsy room of No. 8.	2,000.00
40.	Six chemical fire extinguishers. three gallon Underwriter type.	60.00
43.	Repairs to roads and walks.	250.00
		$2,535.00

Appendix D.

Marine Hospital at Memphis Tenn.

Administrative Equipment.
* * * * * * * * * *

ADMINISTRATIVE EQUIPMENT WHICH should be immediately provided.

Paragraph of report	ITEMS.	Estimated Cost.
	NOTE: Items on this sheet are recommended as conditioned upon this plant being retained as a Marine Hospital.	
14.	Steam sterilizer	$1,000.00
2.	Office (hospital)	176.00
22.	Wards	284.00
18.	Operating and Surgical dressing rooms.	45.00
5.	Kitchen.	135.00
10.	Dining Room	50.00
17.	Laundry	150.00
8.	Officers quarters.	51.00
9.	Attendants quarters.	50.00
15.	Water jacketed incinerator	150.00
36.	New fixtures in wards of Buildings 3 and 4.	200.00
		$2,281.00

Appendix E.

Marine Hospital at Chelsea, Mass.

Administrative Department.

* * * * * * * * * * *

Administrative Department would should be immediately provided.

Number of Report	Item.	Estimated Cost.
	NOTE: Items on this sheet are numbered to consecutive with those which should appear on a Service Department.	
14.	Steam sterilizer	$1,000.00
15.	Office (hospital)	175.00
16.	Desk	125.00
17.	Operating and Surgical Dressing rooms.	50.00
18.	Fixtures.	500.00
19.	Linen Room	50.00
20.	Laundry	500.00
21.	Kitchen equipment.	15.00
22.	Attendants quarters.	50.00
23.	Water heated Incinerator	125.00
24.	Gas fixtures in wards of buildings 3 and 4.	200.00
		$2,690.00

KEY.-

SOLID RED SHOWS BRICK WALKS

STIPPLED RED " GRAVEL DRIVE

DOUBLE RED LINES SHOW CEMENT WALKS

1. EXECUTIVE BLDG.
2. KITCHEN - LAUNDRY BLDG
3. EAST WARD
4. WEST WARD
5. SURGEONS QUARTERS
6. STABLE & DEAD HOUSE
7. CARPENTER SHOP
8. JUNK ROOM.

OO UNDERGROUND CISTERN WITH FILTER (ONLY 2)

O " " WITOUT " (ONLY 1.)

⊙ 3/4" STREET WASHERS (ONLY 7.)

+ 3" FIRE PLUGS. (ONLY 2.)

IRON PICKET FENCE ON BRICK WALL & STONE COPING.

WIRE FENCE.

PIPE RAIL FENCE

SEWER MANHOLE; ABOUT 13'-0" DEEP. (ONLY 1.) ABOUT 8" SEWER

SEWERS , WATER GAS

ILLINOIS ST. IS GRADED & PAVED

ARMSTRONG ST " GRADED BUT NOT PAVED

CALIFORNIA ST " NOT GRADED - NOT PAVED - BUT SMOOTH & LEVEL

GAS LINES INSIDE RESERVATION CANNOT BE LOCATED.

OTHER " " " ARE APPROXIMATE ONLY

· VIEWS · OF · U·S·MARINE · HOSPITAL ·

· MEMPHIS · TENN ·

· GENERAL · VIEW · OF · HOSPITAL ·

· ADMINISTRATION · B'LD'G ·

· KITCHEN · & · ATTENDANTS' · QUART'S ·

· KITCHEN · ATTENDANTS' · & · LAUNDRY ·

· WEST · WARD · & · EXECUTIVE · B'LD'G ·

· WEST · WARD · EAST ·

· EAST · WARD · SOUTH ·

· EAST · WARD · NORTH ·

· VIEWS · OF · U·S·MARINE·HOSPITAL·

· MEMPHIS · TENN ·

· SURGEONS' · RES'D'NCE · FRONT ·

· SURGEONS' · RES'D'NCE · SIDE ·

· WEST · WARD · REAR ·

· CARPENTER · SHOP ·

· NECROPSY ·

· STABLE & NECROPSY · FRONT ·

[illegible] FRONTAGE · OF SITE ·

CARPENTER · SHOP & STABLE

JTC

October 12, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

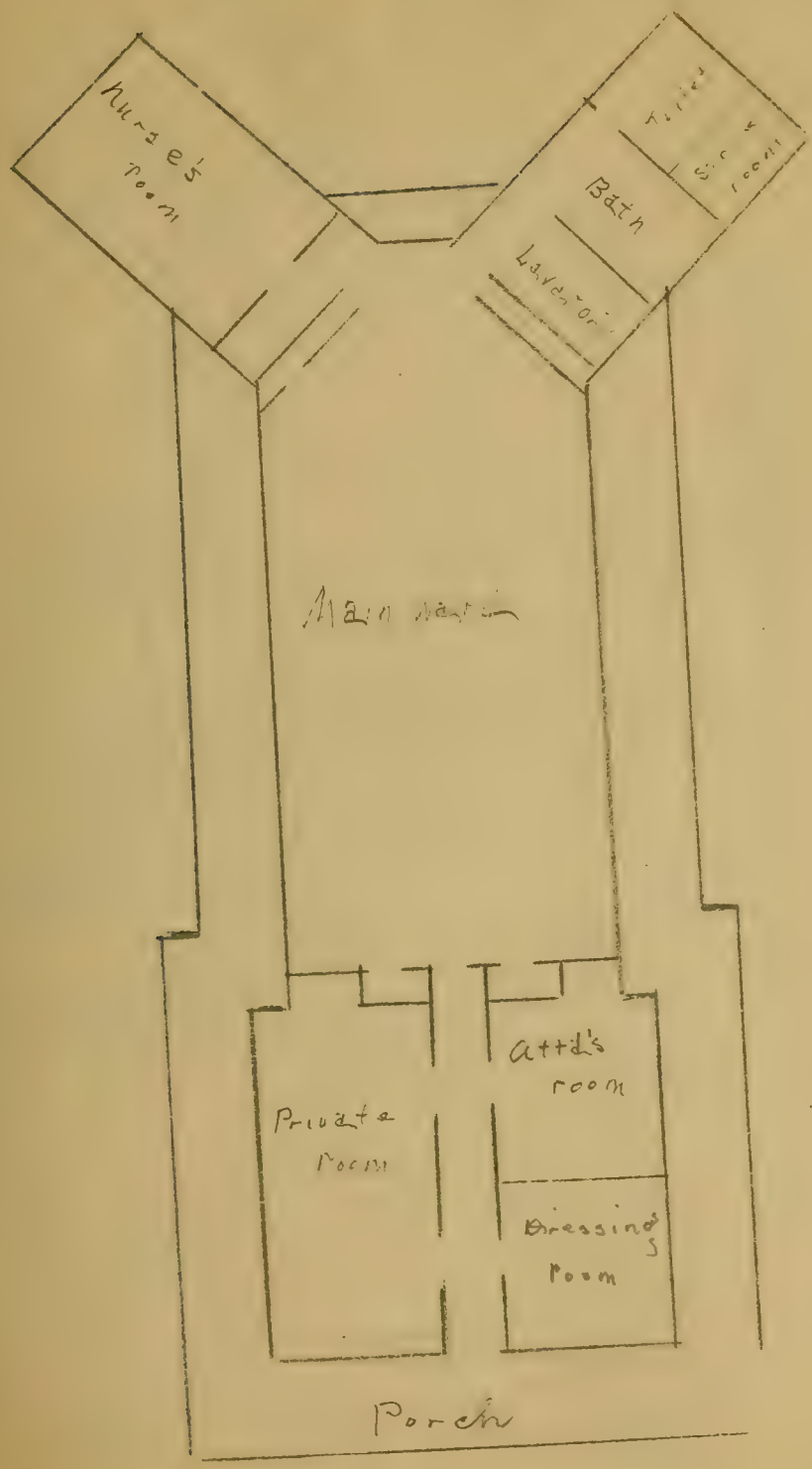
With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Memphis, Tenn., but it is believed that it will be best to postpone the repairs and improvements at this station until it is ascertained if this hospital will be needed for a base for public health work.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

West Wing



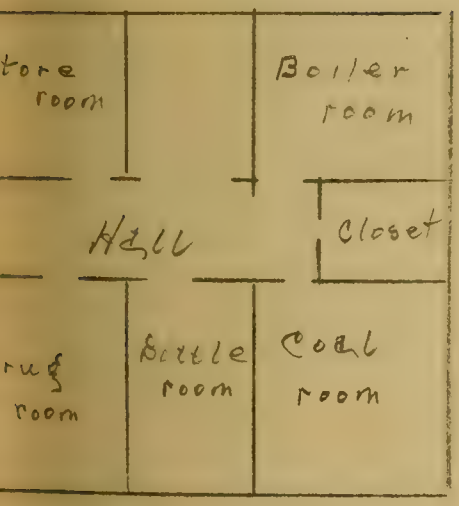
Pharmacist's Quarters

Memphis, Tenn. M.H.

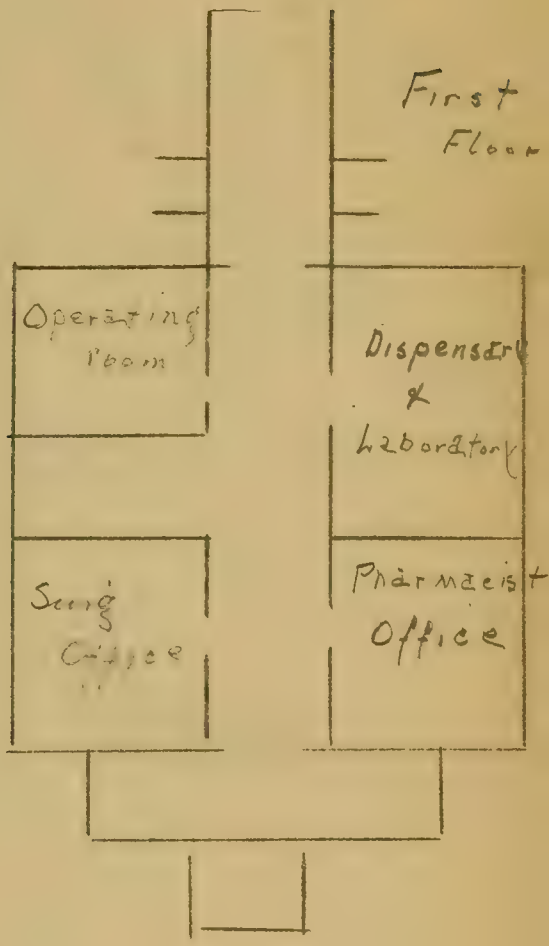
Executive 400

Building

Basement

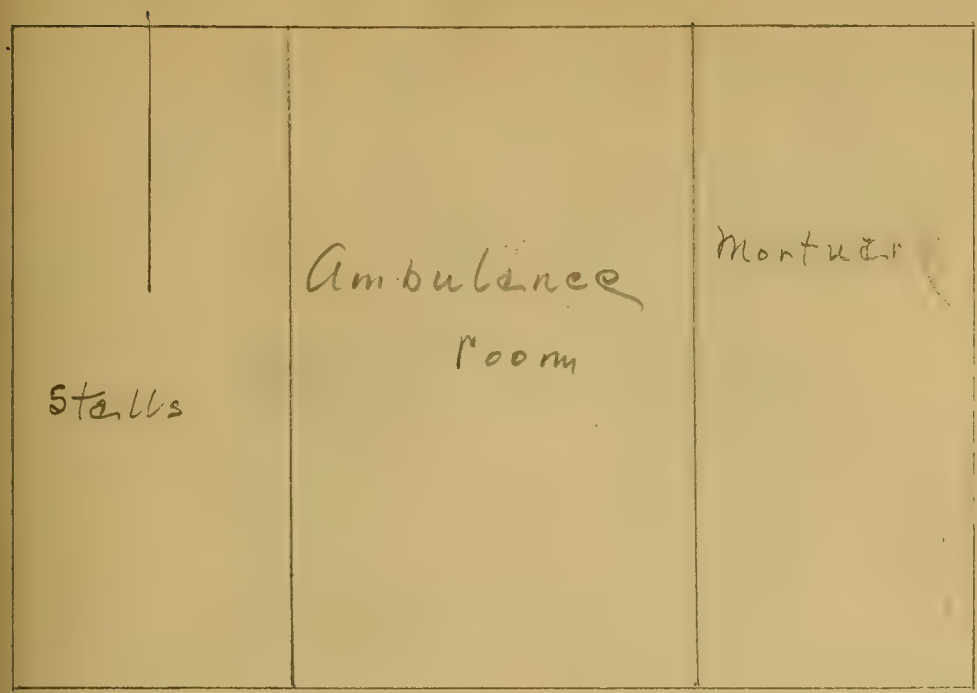


First Floor

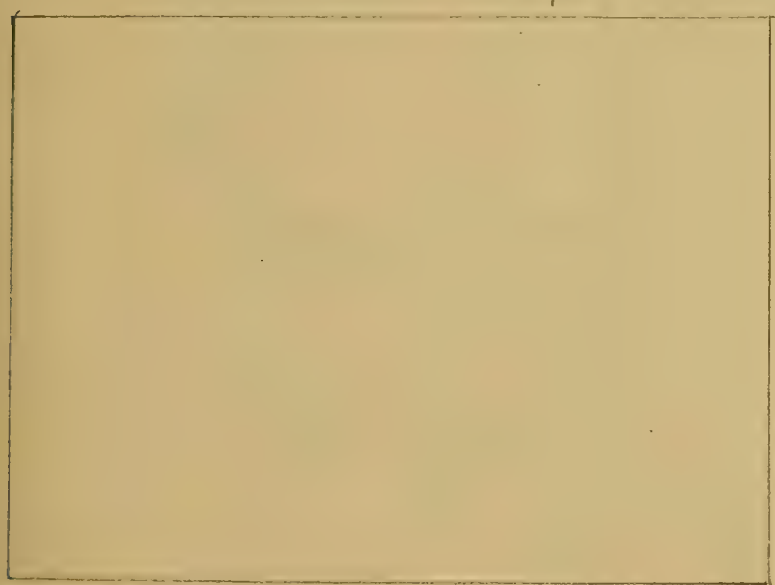


Memphis Tenn. M. H.

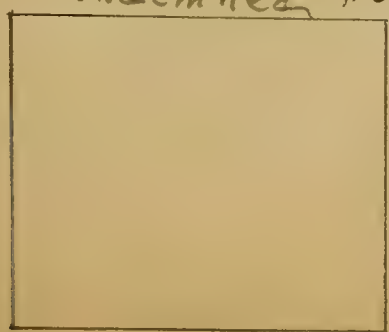
Stable



Carpenter Shop



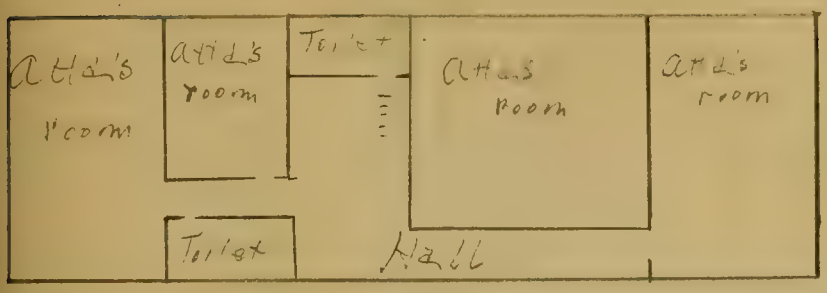
Condemned room



Memphis, Tenn. M.H.
East Ward

Memphis, Tenn, M.H.
Attendant's Quarters

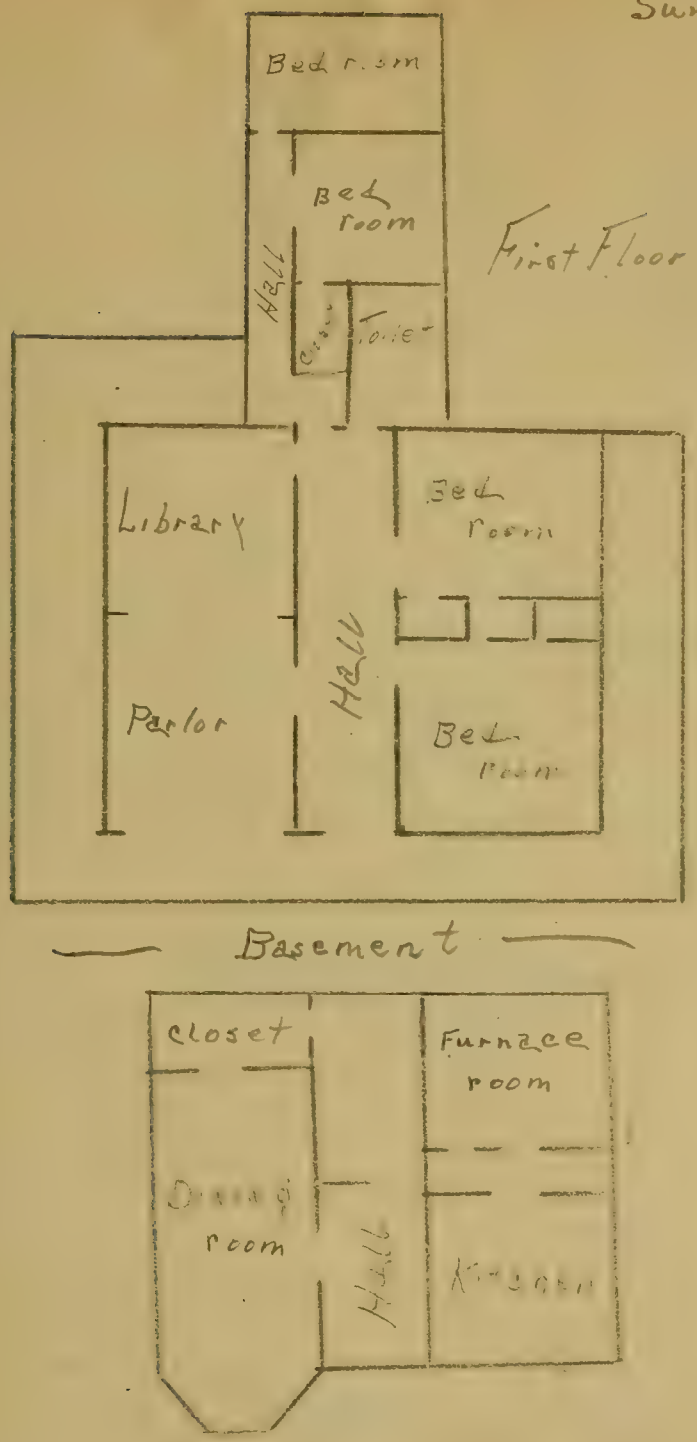
2nd Floor



1st Floor

Basement

Memphis, Tenn. M.H.
Surgeon's Quarters
40



REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT at the UNITED STATES MARINE HOSPITAL at MOBILE, ALABAMA.

By:-

D. A. CARMICHAEL,
Senior Surgeon, U. S. P. H. S.

N. V. PERRY,
Supervising Superintendent,
Construction, U. S. P. H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

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U. S. MARINE HOSPITAL, MOBILE, ALABAMA.

Report of inspection made February, 1915, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The marine hospital reservation is located in the city of Mobile, Ala., about one mile west from the river Alabama. There are about three and three-tenths acres in the reservation and it is bounded on the south by St. Anthony St., on the east by Bayou St., on the west by Jefferson St. and on the north by Congress St. It is oblong in shape with the longest sides facing east and west and is surrounded on all sides by a substantial brick wall.

The hospital building is of brick, consists of a basement, two stories and an attic, and is arranged as a central executive portion and two wings.

The entrance to the main corridor on the first story is rather imposing and consists of a double entry stairway supported by Corinthian columns.

There are porticoes on the south and north sides of the building with porches from the central or executive part for each story and smaller porches on the east and west sides of the first floor.

To the rear of the main building and to the northward is a small laundry, one story frame building. The reservation is divided into two portions by a brick wall extending across it from east to west. The portion to the northward of this wall contains the following buildings:- carpenter shop and coal shed, stable, storehouse, mortuary, paint shop, disinfecting house and isolation hospital.

The grounds are well kept, in good condition, have many handsome trees, including pecan, oak, fig, etc., and present an attractive appearance.

(2) History.

The construction of a marine hospital at Mobile, Ala., was begun as early as 1834 and finished at the end of the year 1837. This was owned by the city of Mobile and purchased by the United States Government in 1841. The original site for the building comprised about one and a half acres and to this was added, in 1856, two additional acres.

From 1841 until the breaking out of the Civil War, the building was used for the treatment of patients of the merchant marine and, from that time until the surrender of Mobile in 1865, it was used for hospital

D. E. MAIN PRINTING, MAIN, ALBANY.

Decoration.

Telephone & Call System.

Report of inspection made February, 1933, with recommendations as to policy to be pursued.

Fire Alarm System.

I.

[illegible]

(I) Location.

(a) Personnel.

The main hospital reservation is located in the city of Doila, about one mile west from the river Kamma. There are about three-hundred acres in the reservation and it is bounded on the south by St. Anthony St., on the east by Iron St., on the west by Jefferson St. and on the north by Dungeon St. It is going to cost with the compact action facing most had work but it surrounded on all sides by a concrete brick wall.

" " " " under Appropriation for Mechanical

The hospital building is of brick, standing at a considerable distance and an area, and is arranged on a central economical plan and two wings. D - Summary of Administrative Equipment required.

The entrance to the main corridor on the first floor is neither impressive and consists of a double entry entrance in [illegible] columns.

There are partitions on the south and north sides of the building with jardins from the central or monitor part for much short and [illegible] porches on the east and west sides of the first floor.

To the rear of the main building and in the corridor is a small laundry, one story from building. The conservatory is located late the [illegible] by a brick wall attached [illegible] it from east to west. The [illegible] to the northward of this wall contains the following occupations: [illegible] and coal [illegible], stable, [illegible], [illegible], [illegible] [illegible] [illegible] and [illegible].

The grounds are well kept, in good condition, here many [illegible] trees, including [illegible], oak, [illegible], etc., and present an [illegible] appearance.

(I) HISTORY.

The construction of a mental hospital at Doila, Ala., was begun as early as 1924 and finished at the end of the year 1927. The [illegible] owned by the city of Doila and purchased by the United States Government in 1941. The original site for the building comprised about one half acres and to this was added, in 1932, the adjoining [illegible].

From 1942 until the breaking out of the first war, the building was used for the treatment of patients of the northern [illegible] and [illegible] time until the occupation of Doila in 1945, it was used for hospital

purposes by the Confederates. After the surrender, it was used by the Federal forces for the same purpose. When it was given up by the army officials at the close of the war, the building was leased by the Secretary of the Treasury to private parties, and conducted as a marine hospital on the contract system until September 1, 1875, when it reverted to the service and has continued under its management since that time.

The original building has been altered and repaired from time to time and additional buildings have been erected.

(3) Need for a Marine Hospital.

Relief has been given to sick and disabled seamen at Mobile since 1841 and continued since that time to the present. As the port will not be likely to suffer a serious reduction in the number of vessels arriving and departing, relief for seamen will always be required.

(4) Adequacy of Plant.

The plant as now arranged is inadequate for the needs of the station. The maximum capacity is 34 beds in the main building and 4 in the isolation building. At times, as many as 42 patients have been accommodated with a consequent overcrowding.

The hospital is not only lacking in bed capacity but in properly segregated wards, accessary rooms and the facilities demanded by modern practice.

The lack of sufficient space for the needs of the patients is due to the fact that 34% of the net floor space in the main building is devoted to quarters for officers and attendants. If the space now assigned to the quarters of the Surgeon in charge is devoted to hospital purposes, and this officer quartered outside the building, sufficient space will be available for 54 to 62 patients, which will meet the probable needs of the station for some time to come.

The condition of the present building does not warrant such general overhauling as would be needed to continue the present plant indefinitely. It is, however, sufficiently well preserved and well enough arranged to make it advantageous to carry out the alterations recommended to provide immediately the increase in capacity needed.

The rearrangement proposed is described in Section III in general under paragraph (1).

(5) Acquisition or Disposal of Land.

In the present arrangement of the buildings, the area of the station is greater than is actually needed at the present time. When, however, the needs of the station require the erection of additional buildings, the entire reservation will be required and none of it should be disposed of. It is also of sufficient extent to meet all probable future needs.

purposes by the Commissioner. After the emergency, it was used by the Federal Forces for the same purpose. When it was given up by the Army authorities at the close of the war, the building was leased to the Inspectorate of the Treasury to provide quarters, and occupied as a Public Hospital in the country across until September 1, 1921, when it reverted to the Army who had its occupied under its management since that time.

The original building has been altered and repaired from time to time and additional buildings have been erected.

(7) Need for a Prison Hospital.

Belief has been given to and discussion among at Prison Commission and authorities about that time to the process. As the port will not be likely to suffer a serious reduction in the number of seamen arrival and departures, relief for seamen will always be required.

(8) Amount of Plan.

The plant as now arranged is inadequate for the needs of the service. The maximum capacity is 64 with is the main building and 2 in the ambulation building. At times, as many as 2 patients have been accommodated with a consequent overcrowding.

The hospital is not well located in the capacity but is properly supported work, necessary room for the facilities necessary to which protection.

The lack of sufficient space for the needs of the patients is due to the fact that 3rd of the non-floor space in the main building is used to provide for officers and attendants. If the space now occupied by the quarters of the Surgeon be added to general in hospital purposes, and the officer quarters outside the hospital, sufficient room will be available for 84 to 90 patients, which will meet the probable needs of the station for some time to come.

The condition of the present building does not certainly meet general operating as would be needed in meeting the present plans. It is, however, satisfactorily well planned and well adapted for the purpose. It is advantageous to carry out the alterations recommended in providing initially the increase in capacity needed.

The recommended program is described in Section III in several paragraphs (3).

(9) Alterations or Improvement of Land.

In the present arrangement of the Buildings, the area of the grounds is greater than is actually needed at the present time. Also, the area of the grounds adjacent the quarters of medical officers, the entire construction will be required and some of it already is occupied. It is also of sufficient extent to accommodate future needs.

(6) Future Development or Disposal of Plant.

This station will probably continue to be an important hospital by reason of the large maritime business of the port. The rearrangement of the main building and the improvements recommended for immediate execution will furnish the facilities required for several years to come. The condition of the present building is such as to warrant any further rearrangement, remodelling or extension, other than that provided for in the improvements recommended to be undertaken at the present time.

When the demands on the service require greater facilities than can be furnished with the remodelled plant, the present main building should be abandoned and a new hospital building erected in the rear of the site of the present building. At that time, the various outbuildings should be moved to the rear of the present reservation where there is ample space for such structures. The present plant should be continued in use until such time as a new building shall become necessary.

II.
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended, $150.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended,

(3) Legislative Appropriation for New Construction.
(for details see appendix C)
Total estimated cost of work recommended, 60,500.00

(4) Appropriations for Administrative Equipment.
(for details see appendix D)
Total estimated cost of items recommended, 1,818.00

T O T A L - - - - - - - $62,468.00

(5) Personnel.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1. Main Hospital. English basement, two story and attic, brick superstructure stuccoed, colonial type with heavy stuccoed brick columns at front and rear, two story verandas, tin roof, plaster walls and ceilings, unpainted above basement. Attic has planed boards on walls with D & M ceiling in one room, balance of attic unfinished.

(8) Accommodation or Equipment of Staff.

This section will probably continue to be an important component of the Service building budget of the part. The requirements of the main building and the temporaries provided for Director-General will further, the facilities and equipment for accommodation of staff. The present building is such as to permit any further development, remodelling or extension, other than that limited for of the Service provisions recommended to be undertaken at the present time.

When the demands on the service require greater facilities than can be furnished with the remodelling plan, the present main building should be abandoned and a new building erected to the rear of the office of the present building. In that case, the returns obtainable should be based on the rear of the present respective above where is ample space for such extension. The present plant should be maintained as one until such time as a new building will hence permanently.

II.

(2) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended.

(3) Appropriation for Furniture and Electrical Equipment of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended.

(4) Appropriation for Gas Installations.
(for details see appendix C)
Total estimated cost of work recommended.

(4) Appropriation for Miscellaneous Purposes.
(for details see appendix D)
Total estimated cost of work recommended.

F O T E - - - - - - - - - - - - -

(8) Personnel.

III.

(1) Building No. 1, Main Building. Digital Department, the study and [illegible], with supplementary structure, provided this site that [illegible] [illegible] optimum of front and rear, the entry [illegible], the [illegible] [illegible] has priority, operative [illegible] department, [illegible] [illegible] [illegible] Building type I & II [illegible] be use room, [illegible] of [illegible] [illegible].

Floors:- In the basement, main hall, attendants' toilet, kitchen, and storeroom are cement floors, base and wainscot, all other basement rooms have 3¼ D & M pine.

First Story:- Central corridors and surgeon's toilet and kitchen have terrazzo floor, all others are 3¼ D & M pine. Second story:- Central corridor, patients' toilet and operating room have terrazzo floor with marble borders and base. Surgical dressing room and out-patient office has porcelain tile floor and base, all other floors are 3¼ D & M hard pine. All trim throughout the building is pine painted. The building is heated by stoves, fire places, and gas radiators, which is inadequate and unsatisfactory. Lighted by electricity. Floor area 23,594 square feet.

Building No. 2. Laundry. One and one-half story, wood frame on brick foundation with one-story leanto for boiler, clapboard exterior, shingle roof on main building, tin roof on leanto, main building has D & M side walls and ceiling unpainted, leanto has no interior finish, 3¼ C & M pine floor in laundry, cement floor in leanto. Stove and heiler heat. Electric light. Floor area 900 feet.

Building No. 3. Carpenter Shop and Coal Storage. One story, wood frame on brick foundation, shingle roof, planed boards and batten exterior, painted. No interior finish or paint, 6" D & M pine floor in carpenter shop, 12" plank in coal room. No heat. No light. Floor area 540 square feet. Building is old, in poor condition.

Building No. 4. Barn. One story, wood frame on brick piers, clapboard exterior, shingle roof. No interior finish except D & M partitions for feed and harness room. Loft over harness and feed room only. Condition fair. No heat. Electric light. Floor area 960 square feet.

Building No. 6. Necropsy House. One story, wood frame on brick foundation, has concrete floor on ground. D & M finish inside, painted, clapboard exterior, shingle roof.

Building No. 7. Paint House. This is a rough board shack made from second hand lumber, on 12" high brick piers, has D & M floor, no interior trim or ceiling, whitewashed exterior. Paper roof.

Building No. 8. Disinfecting House. Wood frame, with D & M inside and out, shingle roof, cement floor on dirt, painted exterior, no paint inside. D & M walls and ceiling, condition fair.

Building No. 9. Isolation Hospital. One story, wood frame, cottage type on 4 foot brick piers, two bathrooms and necropsy room have terrazzo floor and Tenn. marble wainscot 3 feet high; other rooms have wood floors, base and pine trim, painted, plastered walls and ceilings, not painted. Electric lights on drop cords. Has separate water heating unit in a shed on front veranda.

Building No. 5. Storehouse. This is a wood frame on brick piers 10" high. D & M floors, walls and ceiling unpainted, clapboard exterior, shingle roof. Needs new panel door, in lieu of lattice door now in place.

[illegible]

[illegible]

[illegible]

Summary of Alterations Recommended in Main Building:-

In general, the rearrangement recommended in the main building provides for the following:

The removal of Surgeon's quarters from the building and the utilizing of this space for hospital purposes.

The removal of the out-patient office from the hospital to the water front.

A hot water heating system.

An elevator and a dumbwaiter.

Rearrangement of the Pharmacist's quarters.

Provision for Interne's quarters and batchelor Assistant Surgeon's quarters.

Provision for diet kitchen and examining room.

Improvements to operating suite.

Separate wards (4), for white and colored surgical patients. Two quiet wards and one ward for Revenue Cutter officers.

The changes provided do not contemplate the renewal of the trim or window casings, although in poor condition. The structural condition of the building does not warrant such extensive renovation. Briefly summarized, the changes are as follows:

Basement. Relocate kitchen range to accommodate elevator and machinery and provide new door to pantry. Rearrange toilet and Surgeon's servant's room next to pantry so as to provide room for medical stores, space for dumbwaiter, and a small toilet. Utilize Surgeon's laundry for hot water heating plant and incinerator. Remove present dumbwaiter in east hall and stairway at the end of the same hall from the basement up.

First Floor.

Central Portion. Utilize Surgeon's dining room for laboratory and partition off space for elevator, linen closet and closet for cleaning gear. Use Surgeon's library for Surgeon's office. Use present executive office for visitors' reception room. Use Surgeon's parlor for the Pharmacist's office with a door to new room in east wing for dispensary.

East Wing. Rearrange Pharmacist's quarters so as to provide space for the dispensary, toilet and bath for Pharmacist. The present Pharmacist's office and dispensary will be part of the quarters and the kitchen on the porch will be removed.

West Wing. Use Surgeon's kitchen for Interne's and Assistant Surgeon's dining room. Remodel toilet, linen closet and Surgeon's pantry

to provide space for shower bath, dumbwaiter and closet. Divide Surgeon's bedroom in northwest corner into two rooms for Interne's quarters. Use two bedrooms of Surgeon's quarters on south side of hall at west end for Assistant Surgeon's quarters (batchelor). Use the third bedroom on this side for Revenue Cutter Officer's ward.

Second Floor.

Central Portion. Take out present stairway to attic and install it over stairway to first floor. Install glass top partition across north hall to provide sterilizing and etherizing room, having entrance to operating room. Partition off a part of large toilet on east side of the hall for a Surgeon's wash up room with entrance to the sterilizing room. Partition off part of room on west side of hall, now used for surgical dressing and other purposes, for elevator and cleaning gear, and use the rest of the room exclusively as a surgical dressing room. Divide the room on south side, east of corridor, to provide colored toilet and linen room. Use the ward on opposite side of north and south hall as a colored surgical ward.

East Wing. Remove stairway at east end of hall and existing hall partitions. Install a partition centrally in the present hall so as to divide the entire wing into two wards, one for white medical and one for colored medical. Provide smoking rooms on east end of verandas for each ward.

West Wing. At the west end, use part of kitchen, the dining room and bedroom and part of hall for a single ward for white surgical cases by removing partitions. Enlarge present toilet by including part of dining room, to furnish toilet facilities for this ward. Divide bedroom on east of this toilet to provide diet kitchen and examining room. Use the two remaining bedrooms on south side of hall for quiet or special wards. Provide smoking room on North porch for surgical ward.

The above arrangement will accommodate in the main building 54 patients normally, maximum 62.

(2) Offices.

Surgeon's office is located on the first floor of the central part of the building, on the north side, is a large room, well lighted, and sufficiently equipped except for chairs, filing cases and window shades.

Pharmacist's office is located to the west, communicating with the Surgeon's office and dispensary to the rear, is a large room, well lighted and adequately equipped, except for filing cases.

(3) Visitors' Reception Room.

None. Visitors received in the halls and in the offices and is satisfactory for the present, only.

(4) Examining Rooms.

No special rooms. Examinations of patients made in sterilizing

room, now used for out-patients and in the offices and wards.

(5) Kitchen and Diet Kitchens.

Located in the basement in the northeast corner of the central portion of the building, is a large room, fairly equipped, but, owing to its position, very warm during the summer months. A fan is now being installed to remedy this defect. The range is adequate but a new , gas, water heater is needed.

There is no diet kitchen. Food is conveyed from the basement to the ward floors by dumbwaiter and by hand. No special means of keeping food warm on the ward floors. The dumbwaiter is old and unsatisfactory.

(6) Pantry and Food Storage.

A portion of the corridor adjoining the kitchen is used for pantry purposes and lodgement of the refrigerator. A room directly across the corridor from the kitchen is used as a general storage room and some kitchen supplies are stored in it.

(7) Storerooms.

A general storeroom for medical and other supplies, as mentioned in paragraph 6, and a large room on the south side of the attic are used for storage purposes. Unserviceable property is stored in a small one story frame building at the rear of the hospital.

(8) Quarters for Officers.

Surgeon's Quarters. These occupy the entire first floor of the west wing and three rooms in the central or executive part of the main building. There are four bedrooms, a kitchen and bathroom in the west wing, and a dining room, library and parlor in the central part of the main building. All of these rooms are large and comfortably furnished.

Assistant Surgeon and Interns' Quarters. Located on the second floor of the west wing, consist of the following rooms:- 2 bedrooms, library, dining room, kitchen and bathroom. These rooms, if continued in use, would require new furniture such as chairs, wardrobes, etc.

Pharmacist's Quarters. Located in the east wing on the first floor and consist of the following rooms:- 2 bedrooms, one sitting room, dining room, kitchen (built out on rear portico) and bathroom. They are sufficiently equipped.

Attention is invited to the large amount of space devoted for quarters for officers in this hospital, the meagre accommodation in ward space for the patients and the absence of smoking or recreation rooms. This condition of affairs should be corrected and some of the rooms now used for officers' quarters utilized for ward, recreation and executive purposes.

(9) Quarters for Attendants.

Eight attendants have quarters in six rooms, located in the central part and east wing of the basement, and one occupies a room in the isolation house when that building is not in use. One attendant on the station does not sleep on the reservation but goes to his home at night. These quarters require new furniture.

(10) Patients' Dining Room.

Located in the west wing of the basement is a long and narrow room adequate for the purpose and sufficiently equipped . Both white and colored patients are served their meals in this room.

(11) Internes' and Officers' Dining Rooms.

The only room for this purpose is in the Assistant Surgeon's quarters and it is sufficiently equipped for present needs.

(12) Attendants' Dining Room.

Consists of one small room in the basement to the west of and communicating with the patients' dining room. It is adequate for present purposes and sufficiently furnished.

(13) Recreation and Smoking Rooms.

No special room for this purpose. Patients lounge and smoke on the porticoes adjoining the wards and in the wards. When the quarters are rearranged, a room or rooms should be provided for this purpose.

(14) Disinfecting Facilities.

Building No. 8 contains 1 Kinyoun-Francis steam sterilizer of two-ended cylindrical type, with formalin ammonia attachment, with a new 15 HP donkey boiler to supply steam. The hospital surgical dressing room has one Kny-Sprague water sterilizing apparatus, one Kny-Scheerer dressing sterilizer and one instrument sterilizer designed to set on stove, and one gas heated incubator. The entire apparatus should be heated by steam and a new adequate utensil sterilizer should be supplied. The water sterilizer is never used. (City water unusually good).

(15) Incinerators.

There is one 1 bushel capacity gas burning Ricketts' incinerator No. 2 made by the Nightingale Co., Brooklyn, N.Y., which is used only for dry garbage; wet garbage is taken by the city two or three times per week, which is unsatisfactory. A new water heating, coal burning, water jacketed incinerator should be installed.

(16) Disposal of Soiled Linen.

Removed from the wards and rooms in open hampers. Infected linen

(8) Quarters for Attendants.

Eight attendants have quarters in six rooms, located in the central part and most wing of the basement, and one occupies a room in the laundry house when that building is not in use. The attendants on the wards sleep on the reservation but pass in the room at night. These quarters require no furniture.

(9) Patients' Dining Room.

Lunch is the most wing of the basement is a long and narrow room adequate for the purpose and sufficiently equipped. Both male and female patients are served their meals in this room.

(10) Laundry and Patients' Bathing Rooms.

The only room for this purpose is in the building formerly occupied as a quarantine station and is in sufficiently equipped for present needs.

(11) Attendants' Dining Room.

Consists of one small room on the basement in the rear of and connecting with the patients' dining room. It is adequate for present purposes and sufficiently furnished.

(12) Sterilization and Sanitary Rooms.

No a special room for this purpose. Private lavatory and sanitary the patrolmen adjoining the wards and in the wards. Also the quarantine station, a room or rooms should be provided for this purpose.

(13) Ventilation Facilities.

Building No. 5 possesses 1 Plenum-Thermit steam ventilator of modern cylindrical type, with torrid annulus attachment, with a pan of 30 horsepower capacity to supply steam. The hospital proper is heated from the Bay-Lyman water distributing apparatus, the Bay-Lyman steam distributor and the Bayonne water distributor designed for hot air rooms, and the Bayonne hot tub. The entire apparatus should be placed in place and the rooms should eventually be supplied. The water connections are to be never used. (Only water necessarily used.

(14) Isolation.

There is one 1 bedded isolation for burning violent delirium. 1 room in the Quarantine Dr., Pensacola, Fla., which is used only for dangerous and persons to taken by the city is to be first time per week, which is unsatisfactory. A new water heater, and steam, and heater should be installed.

(15) Disposal of Toilet Liquid.

Removed from the wards and sewer to open tanks. Infected liquid

is sterilized in the steam chamber. Removed from the wards and rooms after soaking in bichloride or carbolic solution. Baskets for infected clothing wrapped in a sheet dipped in bichloride solution.

(17) Laundry Facilities.

Building No. 2 contains one 84" Troy mangle, one Troy centrifugal dryer, one 15 HP slide valve steam engine, one 15 HP donkey boiler, 1 galvanized iron soap kettle. Water is heated by steam jet. The water heating laundry stove in isolation hospital should be moved to laundry and connected to a hot water tank. An 8 ft. x 10 ft. and 4 track steam dry room should be added. Irons are at present heated by charcoal pots which is unsatisfactory.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room. Located in a small oblong room constructed as an extension over the roof of the rear porch. It has a glass roof and is fairly lighted. It is rather small but answers the purpose. The equipment is sufficient except that a new instrument sterilizer is required.

Surgical Dressing Room. No special room for this purpose. Surgical dressings are done in the corridor adjoining the operating and sterilizing rooms and sometimes in the wards.

The old surgical operating room is used as a sterilizing, wash up and laboratory room and also as an out-patient office.

The sterilizing outfit and wash up apparatus should be placed in the corridor adjoining the operating room, the old operating room used as a surgical dressing room and the out-patient office moved to a position nearer the water front. A ward carriage and a case for holding dressings are needed.

(19) X-Ray Facilities.

No outfit at the station. Work done in the city of Mobile on accepted proposal at from $10.00 to $15.00 per case. This arrangement is satisfactory.

(20) Laboratory.

Located in old surgical operating room in northwest corner of the second floor of the building. It is fairly equipped and sufficient for ordinary clinical work. Wasserman's are sent to the Hygienic Laboratory, Washington, D. C. A new microscope is needed.

(21) Dispensary.

This is a medium sized room located to the eastward and adjoining the Pharmacist's office. It is well equipped and only an apparatus for distilling water is required.

is sterilized in the steam chamber. Removed from the cradle and room after cooling in baskets or carried in metallic containers. Baskets for infected clothing stripped in a sheet dipped in disinfecting solution.

(17) Laundry Facilities.

Building No. 7 contains one gas fired steam engine, one fire cooking range, one 15 hp utility valve steam engine, one 15 hp dynamo lighting, 1 gallon vertical iron soap kettle. Water is heated by steam jet. The kitchen boiler and laundry stove is inadequate. Provisional should be made to install one more boiler to a hot water tank. In 2 ft. x 15 ft. and 4 tubes fire room should be added. Irons are at present heated by charcoal pots which is unsatisfactory.

(18) Operating and Surgical Equipment Room Facilities.

Operating Room. Located in a small annex from contagious on an extension over the roof of the main ward. It has a glass roof and is fairly lighted. It is rather small for numbers the patients. The equipment is sufficient except that a hot instrument sterilizer is required.

Surgical Dressing Room. No special room for this purpose. Surgical dressings are done in the wards without protecting the sterilizing room and operations in the ward.

The old surgical operating room is used as a sterilizing room and laboratory room and also as an out-patients clinic.

The sterilizing outfit and small up elevation should be placed in the corridor adjoining the operating room. The old operating room used as a surgical dressing room and the out-patient office lower in a position where the water level. I want carrying out a room for isolated dressings and so on.

(19) X-Ray Facilities.

No equipt at the present time. Work done in the room of making an operated proposed at from 10,000 to 8,000 per room. Room arrangement is satisfactory.

(20) Laboratory.

Located in old surgical operating room in northwest corner of the second floor of the building. It is fairly adequate and equipped for ordinary clinical work. Bacteriologist has sent to the hospital in Prague. Building. E. G. A man attendant is needed.

(21) Laboratory.

This is a serious want from location to the northwest and adjoining the Pharmacist's office. It is well equipped but only an apparatus for distilling water is required.

(22) Wards for Seamen.

There are four wards for seamen all on the second floor, two large wards and two small wards. One of the large wards is used for colored medical and surgical cases and the other for white medical cases. One of the smaller wards is used for white medical cases and the other for overflow or special patients. The normal capacity of the large wards is 10 and the small wards 5 each. At present there are 15 beds in the white ward, which is much overcrowded. Tubercular patients, unless very ill, are quartered in the isolation building. At present a serious case of tuberculosis is quartered in ward smoking room. The ward space is inadequate for the needs of the station. Two tent houses should be provided for ambulent tubercular patients. In the remodelled main building, space will be available for very sick cases.

(23) Quiet Wards.

None, the smallest ward having capacity for 5 beds. Facilities are inadequate.

(24) Wards for Revenue Cutter Officers.

None are specifically assigned. In emergency, one of the 5 bed wards is used. Facilities are inadequate.

(25) Toilet Facilities.

Toilet facilities are generally adequate in scope, but are ancient in design and should be generally overhauled; all lead traps should be replaced with modern equipment and rooms should be arranged as shown on revised plans herewith.

(26) Portable Tubs.

There is one, without rack, on the station and it is considered sufficient, as few cases of typhoid are treated here.

(27) Padded Cells.

No rooms for this purpose. There is an old Humane Restraint apparatus, consisting of wristlets only. A restraint sheet should be provided.

(28) Necropsy Facilities.

Necropsy facilities are located in a small poorly constructed building at the rear of the hospital and is supplied with one old glass top dissecting table, with bucket drain, one enamelled iron sink, cement floor and floor cesspool, hose connection and one electric drop lamp on

(10) Wards for Females.

There are four wards for women all on the second floor, two large wards and two small wards. One of the large wards is used for medical and surgical cases and the other for maternity and gynaecological cases. One of the smaller wards is used for acute medical cases and the other for chronic or operation patients. The normal capacity of the large wards is 12 and the small wards 5 each. At present there are 18 beds in the maternity ward, which is much overcrowded. Patients' lavatories, bathrooms are quartered in the building. At present a separate cook is necessary because in maternity ward there. The meat supply is obtained from the meats of the patients. The meat supply is provided by subsidiary private. In the meantime milk delivered, water will be available for very sick cases.

(11) Staff Wards.

Here, the medical and dental staff are housed separately for 3 beds. Facilities are inadequate.

(12) Wards for Female Junior Officers.

These are specifically designed. In emergency, one of the 3 beds needs to meet. Facilities are inadequate.

(13) Toilet Facilities.

Toilet facilities are generally adequate in range, but are lacking in design and should be generally overhauled; all had been recently improved with modern equipment and room should be arranged at least at improved plans forward.

(14) Surgical Block.

There is one, without roof, on the station and it is inadequate facilities, as for clean of typical any improved room.

(15) Padded Cells.

No rooms for this purpose. There is an old Chinese Maternity Hospital, consisting of verandahs only. A recovery shed should be provided.

(16) Mortuary Facilities.

Mortuary facilities are located in a small public conveniences building at the rear of the hospital. One is supplied with one big slab for dissecting table, with water supply, one enamelled iron sink, several floor and floor coverings. Some connection and use electric light for the

cord. Should be repaired and painted.

(29) Isolation Facilities.

A separate one story wooden building, 24' x 40', with veranda on one side is provided for this purpose.

The building contains one ward, 15 x 30, ward bath, a nurses' room with separate bath, a closet, a small dispensary and a small room with separate entrance, marked mortuary. At present, ambulant tubercular cases are quartered in smoking room of main building , to save the services of a special nurse.

Food is supplied from the main kitchen.

The building has not been used for other than tubercular cases for over three years.

Smallpox cases can be sent to city pest house, as has been done at times in the past. Tubercular cases could most advantageously be treated in tent houses or tents. All tent floors should be elevated about 2 feet above ground on account of moisture.

(30) Out-patient Office.

The room now used as a sterilizing room and laboratory is also used for the reception and examination of out-patients since the downtown office of the Service was abandoned.

It is not suited for this purpose as it is situated on the second floor of the hospital, making the use of two flights of stairs necessary for applicants and the room is needed for other purposes.

Within a short time the office of the Service has been moved from its downtown location near the water front to the hospital, one mile distant on St. Anthony St. This has had an injurious effect in diminishing the number of patients treated, as they object to going such a distance . An office in the vicinity of the water front should be established at an early date.

(31) Floor Space.

The total net floor space in the main hospital building is as follows:

Basement (ground floor)	4,773	square	feet
First floor	5,013	"	"
Second Floor	5,039	"	"
Third Floor (attic)	2,880	"	"
	17,695	"	"
Total hall space,	5,899	"	"
TOTAL	23,594	"	"

Total net floor space for hospital uses is	41%
" " " " " quarters (except hall space) is	34%
" " " " " hall space (including quarters)	25%
	100%

work. Should be repaired and painted.

(14) Lighting Facilities.

A separate one story frame building, 24' x 40', with concrete on the side is provided for this purpose.

The building contains one unit, 22 x 24, with a concrete floor with composition roofing, a chimney, a small fireplace and a small sink with water in service, adequate ventilation. It provides, moderate illumination being derived in sufficient from of this building, by some 12 windows of a fixed sash.

Heat is supplied from the main building.

The building has not been used for other than temporary cases for over three years.

Sunlight rooms can be used to air very hours, in bad days on days in the rest. Prevention cases could most advantageously be required in last hours or tests. All such fixtures should be adjusted about 2 feet above ground on account of mosquitoes.

(15) Contagious Cottage.

The room now used as a storehouse from the laboratory is also used for the reception and hospitalization of contagious cases the number also of the Service was diminished.

It is not useful for this purpose as it is situated in the middle floor of the hospital, making the use of the floors of which is entirely unsuitable for applicants and the room is worst for other purposes.

Within a short time one office of the Service has been moved from the southern Sanatorium over the water front to the hospital, one side adjacent to St. Anthony St. This has the infectious effect to disturbing the number of patients treated, by some things to policy much a difference. An office in the vicinity of the water front should be overlooked in an emergency case.

(16) Floor Space.

The total net floor space in the main hospital building is as follows:

Basement (ground floor)	4,770	square feet
First floor	5,028	" "
Second floor	8,009	" "
Third floor (attic)	2,880	" "
	[illegible]	" "
Total half space	5,000	" "
Total	23,504	" "

Total net floor space for hospital wards is:

" " " "	[illegible]	" "
" " " " "	[illegible]	" "
" " " " " "	[illegible]	" "

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 30 beds in the main building, maximum 34. There are also 4 beds in one ward in the isolation building. On a normal basis each patient has 82 square feet of floor space, and 970 cubic feet of air space.

A larger number than the maximum given have been quartered in the hospital but only by overcrowding.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913 and 1914 and also for the period from July 1 to December 31 for the calendar years 1913 and 1914:

	Fiscal Years			1913	1914
	1909	1913	1914	Jul 1-Dec 31	
No. days hospital relief furnished,	7510	8369	8399	3754	5421
Daily average hospital patients,	20.5	22.9	23.0	--	--
Total daily cost per hospital patient,		$2.60	$2.36	--	--
No. of hospital patients,	433	404	357	--	--
No. of out-patients,	841	687	436	--	--
No. of times treated,	1210	1159	835	--	--

On February 9 there were 21 patients in the hospital of whom 2 were chronics and two tubercular. Of the 21 patients 13 were white and 8 colored.

During the fiscal year 1914, 2400 days hospital relief were furnished foreign seamen.

During the last 10 years the maximum daily number of hospital patients was approximately 42, minimum 8.

The year of greatest activity during this period was 1904 when 11,864 days of hospital relief were furnished. The number of days hospital relief were practically the same for 1913 and 1914, but 12 per cent greater than in 1909. For the 6 months of the present fiscal year the relief furnished has been 45 per cent greater than for the same period of last year.

The number of out-patients and times treated has decreased steadily during the last 5 years and for 1914 was half what it was in 1909.

(34) Ambulance Service.

The station has an ambulance in excellent condition and practically new. It is the two-horse type, but is used for one horse and is rather heavy for the purpose. The station averages about 3 trips per month. There is only one firm capable of furnishing ambulance service, rate per trip $6.00. It is impossible to utilize the city hospital service as that

(32) Bed Capacity and Beds Allowed.

The total normal capacity of the hospital is 50 beds in the main building, maximum 60. There are also 6 beds in new cars in the isolation building. On a normal basis each patient has 50 square feet of floor space. Are 100 cubic feet of air space.

A larger number than the maximum given have been provided in the hospital but only by overcrowding.

(33) Patient Attendance per Bed.

The following table shows the relief afforded by the attendance during the fiscal years 1913 and 1914 and also for the period from July 1 to December 31 for the calendar years 1911 and 1912:

	Fiscal Years		Jan. - July	
	1913	1914	1914	1915
No. days hospital relief furnished.	[illegible]	[illegible]	[illegible]	[illegible]
Daily average hospital patients.	38.3	38.4	32.4	—
Total daily cost per hospital patient.	[illegible]	[illegible]	—	—
No. of hospital patients.	432	404	387	—
No. of out-patients.	941	657	426	—
No. of times treated.	[illegible]	[illegible]	886	—

On February 7 there were 22 patients in the hospital of which 2 were civilian and two colored. Of the 22 patients 17 were white and 5 colored.

During the fiscal year 1913, 2410 days hospital relief were furnished foreign seamen.

During the last 12 years the maximum daily number of neurotic patients was approximately 42, minimum 6.

The year of greatest activity during this period was 1913 when 12,806 days of hospital relief were furnished. The number of days hospital relief were practically the same for 1911 and 1912, but 12 per cent greater than in 1910. For the 6 months of the present fiscal year the relief furnished has been 45 per cent greater than for the same period of last year.

The number of out-patients and times treated has remained stationary during the last 2 years and for 1911 was half what it was in 1914.

(34) Ambulance Service.

The station has an ambulance in excellent condition and practically new. It is the two-horse type, but is used for one horse and is ready for the purpose. The ambulance averages about 2 trips per month. There is only one firm capable of furnishing ambulance service, from Pittsburg $5.00. It is impossible to obtain the only hospital service in that

institution is restricted from entering into competition with private firms. The present method of supplying ambulance service with hospital equipment is satisfactory and should be continued. A second horse is unnecessary.

(35) Heating, Power Plant and Ventilation.

The main hospital building is heated by fire places and a few gas radiators placed chiefly in Surgeon's and Pharmacist's quarters. Fire places in all wards and offices are very inadequate. A hot water heating system is needed and should be located in present Surgeon's laundry, together with hot water heater and steam generating incinerator, connected to sterilizers in sterilizing room. An elevator and new dumbwaiter are also needed in location shown in rearrangement plans, herewith. Ventilation by windows and fireplaces is ample.

(36) Illumination.

Illumination is by electric service through drop cords, without shades. Wires run concealed on spools or exposed on cleats. Very poor and dangerous. Wiring is in defiance of city ordinances; should be run in steel conduits and have complete set of approved lighting fixtures.

(37) Decoration.

There is no scheme of decoration; all walls are white, unpainted plaster, all trim painted white; building should be repainted in soft color tones. This should be done at once.

(38) Telephone and Call Systems.

There is one direct connected city telephone in hall of main building with extension in Surgeon's office, Bell system. There is no intercommunicating telephone system. A call bell system with annunciator in Pharmacist's office was formerly in use, but it is now out of order and not worth repairing. There is one large gong on rear porch first floor, with 2 push buttons in the Surgeon's and Pharmacist's offices, which are used to call attendants by a system of rings. A bell is also installed in second floor corridor with 2 push buttons in same location to call nurse on duty. There is no bedside call system. With the rearrangement of building proposed, an intercommunicating telephone and bedside call system should be installed. The present call bells are loud and disturbing and should be done away with.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant and none is needed. Artificial ice supplied to ice boxes as at present is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from 6" city main in St. Anthony St. through 2 inch connection to main building with extensions to outbuildings. The

source of the city supply is a lake at Spring Hill. Its quality is excellent and quantity ample. The pressure is 80 to 90 pounds. Water for domestic service feeds through meter and pressure reducing valve (about to be installed). Fire supply by-passes meter and is paid for at flat yearly rate of $25.00.

There are two fire hydrants in grounds with one 2" connection. Supply main is 2". In the remodelling recommended, 4" main should be laid from street to hydrant and a third hydrant should be installed in the rear of the reservation, in the vicinity of the isolation building. All hydrants should be city fire hydrants, two-way, for 2½" hose. There are three hose racks, one on each floor of main building, with 125 feet of 2 inch linen hose on each rack. There is also 200 feet of 2" linen hose on racks at one of the outside hydrants.

When the station is remodelled, one wheel hose reel with 300 feet of fire hose should be provided.

There are 12 chemical fire extinguishers, well distributed and in good condition. City fire engine house is 3 blocks away. There are 5 city hydrants on streets surrounding the reservation.

(41) Fire Alarm System.

Station has bell on rear porch of first floor which is struck by hand. Drills are held weekly. City fire alarm box is located just outside reservation on corner of North Jefferson and St. Anthony Sts. Facilities are adequate.

(42) Sewer and Other Drainage.

Sewerage is disposed of by separate system and discharges into city sewer in Bayou street through four separate terra cotta pipe connections. Storm water is discharged into surface drains in the streets. Facilities are adequate and in good condition.

(43) Streets, Roads, Walks, Fences and Grounds.

There is a brick roadway from entrance on Jefferson to rear of main building. A concrete walk leads from this pavement to isolation building. The main entrance of the hospital building has a concrete approach and steps leading directly to sidewalk on St. Anthony St. There is a brick street sidewalk along the station boundary on St. Anthony St. and dirt sidewalks on the other 3 streets.

The reservation is surrounded on all sides, except the frontage on St. Anthony Street, with a brick wall and is divided by a similar wall in the rear of the main building. There is an entrance gate on east side of the reservation, except Bayou St. (old entrance closed up). The St. Anthony St. boundary is enclosed by a low masonry wall with iron picket fence, having 2 pedestrian entrances, besides approach to main entrance steps, with iron fences and brick posts. Fence needs repainting. All facilities in good condition.

(44) Wharves, Sea Walls, Etc.

None, no waterfront.

(45) Live Stock, Vehicles, Etc.

The station has one horse about 11 years old and in good condition. There is one two horse ambulance nearly new and used with one horse, and in excellent condition, one dump cart, one freight wagon in good condition. There is also one ambulance wagon and one horse lawn mower which are unserviceable. One light wagon is needed. A lawn mower is not required.

(46) Personnel.

There are on duty at this station one commissioned officer, one Interne, one Pharmacist and ten attendants classed as follows:- 1 engineer, 1 messenger, 1 cook, 1 assistant cook, 2 nurses, 1 night watchman, 1 yardman, 1 hostler and 1 hallman, none colored.

(47) Records.

The records of the station are properly kept and in good order, with the exception of the clinical records, which are rather brief and incomplete in some particulars.

(48) Books.

There are a few modern medical works in the station library, but many of the books are old and out of date.

(49) Purchase of Supplies.

Subsistence and other supplies are purchased on yearly contracts obtained in the usual manner. Purchase on accepted proposals at intervals of three months would have no especial advantage. Purchase in the open market would enable the station to take advantage of fluctuation in prices.

APPENDIX A

Marine Hospital at Mobile, Alabama.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
38	Repairs and painting necropsy building	$75.00
43	Repainting fence.	75.00
	T O T A L - - - - - -	$150.00

See Appendix C

APPENDIX B

Marine Hospital at Mobile, Alabama.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
None. See Appendix C		

Refrigerating plant

APPENDIX C

Marine Hospital at Mobile, Alabama.

New Construction.
****

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
1	Remodeling Building and improvements to plant.	$60,000.00
22	Tent houses.	500.00
	T O T A L - - - - -	$60,500.00

APPENDIX D

Marine Hospital at Mobile, Alabama.

Administrative Equipment.
* * * * * * *

ADMINISTRATIVE equipment which should be provided,
(See administrative sheet attached)

Paragraph of report.	ITEMS	Estimated Cost.
2	Office (Hospital)	$119.00
22	Wards	145.00
18	Operating & Surgical Dressing Rooms	289.00
21	Dispensary	30.00
20	Laboratory	125.00
5	Kitchen	110.00
8	Quarters for Officers	285.00
9	Quarters for Attendants	565.00
15	Water jacketed incinerator	200.00
	T O T A L - - - - - - - -	$1,618.00

APPENDIX A

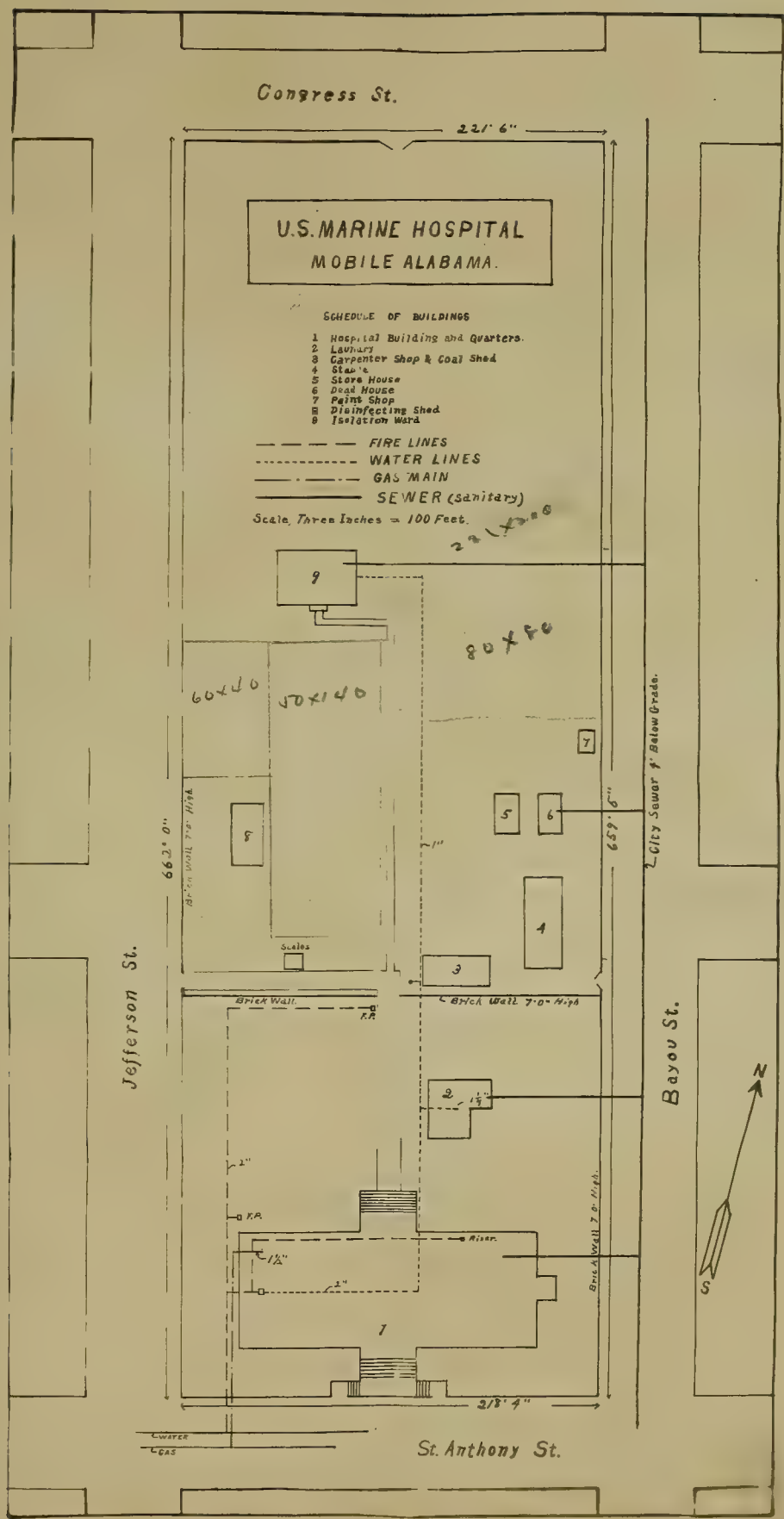
[illegible] Hospital of [illegible], [illegible]

[illegible]

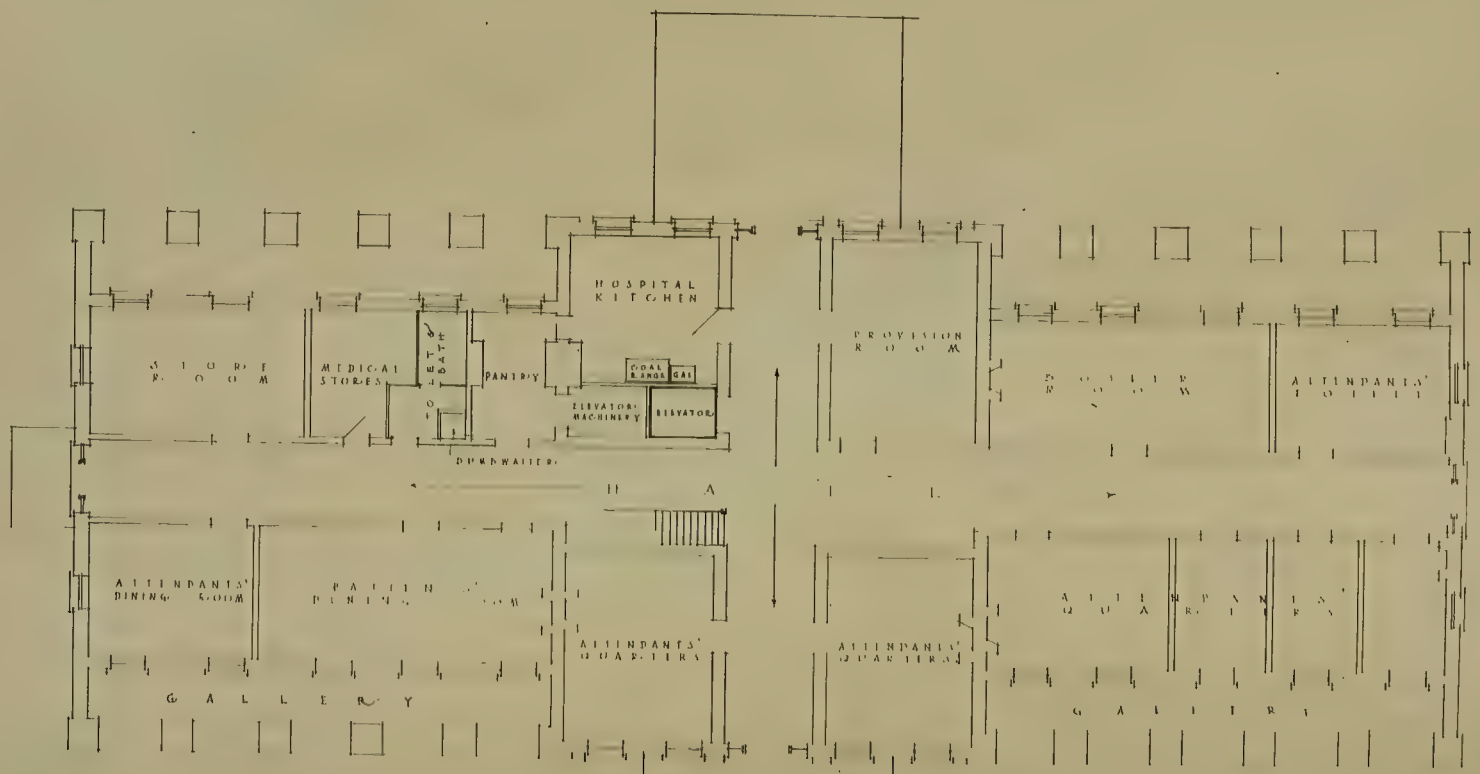
* * * * * *

[illegible] approved which would be provided
(See [illegible] under [illegible])

Priority of Work Order	ITEM	Estimated Cost
1	Office (Reception)	$111,[illegible]
11	Wards	1[illegible],[illegible]
13	Operating & Surgical Dressing Room	[illegible]
14	Laboratory	[illegible]
20	Laboratory	[illegible]
5	Kitchen	[illegible]
8	Quarters for Officers	[illegible]
9	Quarters for Enlisted	1[illegible],[illegible]
16	Floor Drainage Installation	[illegible]
	T o t a l	$1,[illegible],[illegible]



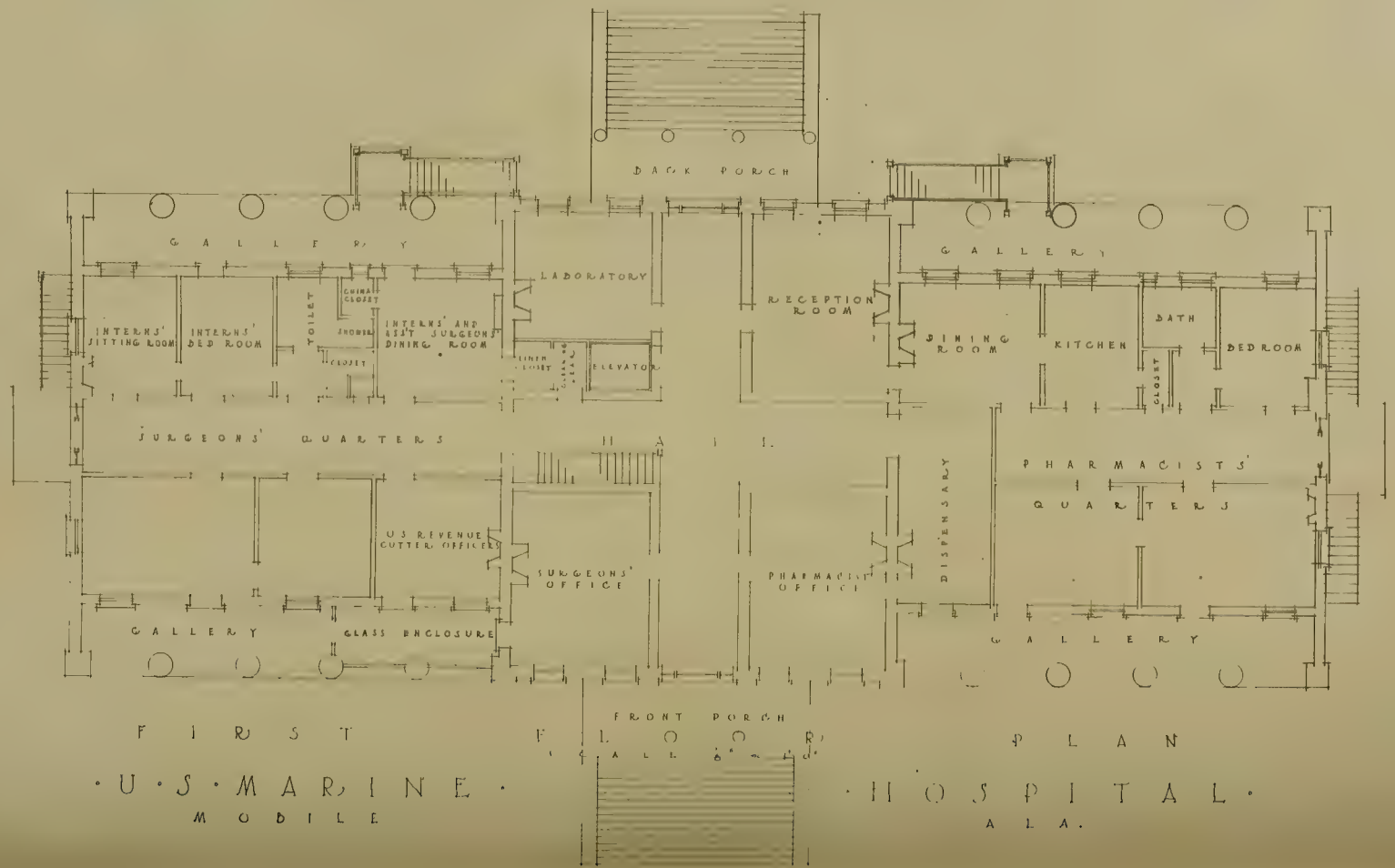
Estimated tank capacity 85

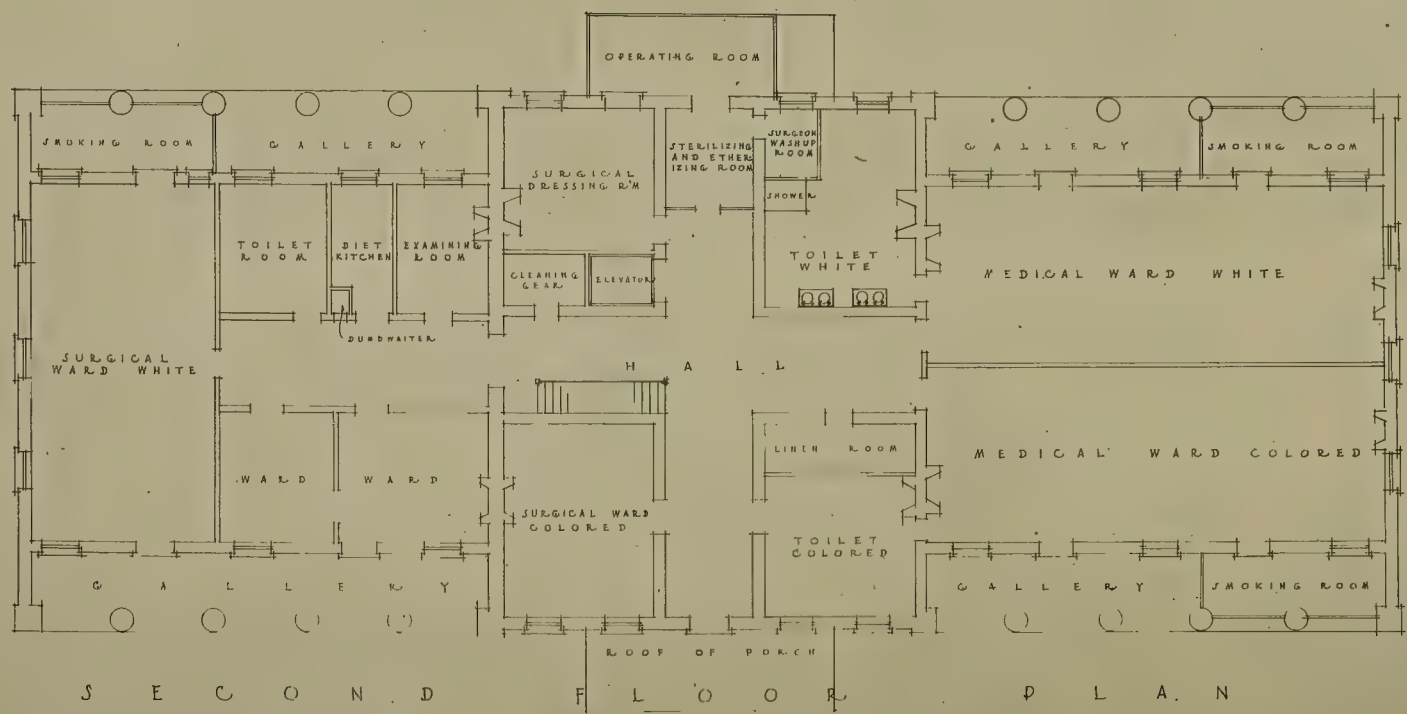


BASEMENT FLOOR PLAN

U.S. MARINE HOSPITAL

MOBILE ALA.


BACK PORCH
GALLERY
LABORATORY
RECEPTION ROOM
GALLERY
INTERNS' SITTING ROOM
INTERNS' BED ROOM
TOILET
CHINA CLOSET
SHOWER
CLOSET
INTERNS' AND ASS'T SURGEONS' DINING ROOM
LINEN CLOSET
ELEVATOR
DINING ROOM
KITCHEN
BATH
BED ROOM
CLOSET
SURGEONS' QUARTERS
HALL
PHARMACISTS' QUARTERS
DISPENSARY
U.S. REVENUE CUTTER OFFICERS
SURGEONS' OFFICE
PHARMACIST OFFICE
GALLERY
GLASS ENCLOSURE
GALLERY
FRONT PORCH
FIRST FLOOR PLAN
·U·S·MARINE· ·HOSPITAL·
MOBILE ALA.



SECOND FLOOR PLAN

·U·S·MARINE· ·HOSPITAL·

MOBILE ALA.

[illegible] HOSPITAL

[illegible]

GENERAL VIEW OF GROUNDS

[illegible]

[illegible] STERILIZER BUILDING

[illegible]

[illegible]

[illegible]

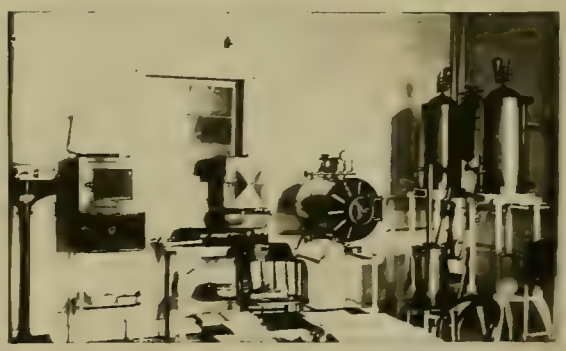
[illegible]

U·S·MARINE·HOSPITAL·

WARD·WHITE

WARD·COLORED

SURGICAL·DRESSING·ROOM



STERILIZING·ROOM

STERILIZING·ROOM

STAIR·HALL

KITCHEN

Tentile

October 12, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Mobile, Ala., with the exception of the changes in the quarters of the medical officer in charge. The Bureau is not prepared at the present time to detail an additional commissioned officer for duty at this station, and the services of an interne or an acting assistant surgeon cannot always be obtained. As it is necessary to have a medical officer live on the reservation in order that patients needing immediate attention may be properly cared for, it is inadvisable to move the medical officer in charge out of his quarters until some other satisfactory arrangement can be devised.

The assistant surgeon's quarters are at present unoccupied and it is suggested that these quarters be used temporarily as an out-patient office, laboratory, and quarters for officers of the Coast Guard who may be ill at this hospital, as recommended in the attached letters of the medical officer in charge.

A refrigerating plant is needed at this hospital and I desire to add a recommendation to those of the committee that a plant of this character be installed.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE
PHYSICAL & ADMINISTRATIVE
EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

NEW ORLEANS, LA.

BY

D. A. CARMICHAEL,
Senior Surgeon, U. S. P. H. S.

M. V. PERRY,
Supervising Superintendent
of Construction, U. S. P. H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of administrative Equipment required.

Drawings.
Photographs of Station.

U. S. MARINE HOSPITAL, NEW ORLEANS, LA.

Report of inspection made in February, 1915, with recommendations asto policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The Marine Hospital reservation, comprising about 23 acres, is located on the east bank of the Mississippi River about six miles north of the business center of New Orleans and about 1 mile below nine mile point on the Mississippi River, and southeast of Audobon Park. It is somewhat quadrilateral in form and the buildings on it face the levee and river. It is bounded on the south by the Mississippi River, on the west by Henry Clay Avenue, on the east by State Street and on the south by Tchoupitoulas St. It is inclosed by an ornamental iron fence on the south side, and by a substantial brick wall 7'9" high on the other three sides. A portion of the reservation on the east side is cultivated as a garden, the work being done under an arrangement with a resident of the neighborhood, and this part is separated from the main portion of the reservation by a wire fence. The remainder of the reservation has been graded and sodded; trees, hedges, shrubs and flowers placed therein; roads constructed and cement walks laid, and they present a handsome and attractive appearance.

The hospital buildings are arranged as a pavilion group consisting of a central building, wards, quarters, kitchen and accessory buildings for various purposes located to the north and westward.

The fenced-in portion of the reservation is about 17 acres as scaled from plot plan.

The distance in front of Executive Building from the iron fence along the river side front to the river face of the levee at its top is approximately 228 feet and to the foot of the rear slope of the levee approximately 123 feet. The distance shown on station plot plan is in error. The Public Belt Railroad (owned by the City) has four tracks occupying a space about 53 feet between the iron fence and the levee, and next to top of levee slope, the nearest track being 70 feet from the iron fence referred to above. Congress by Act approved February 13, 1900 (Public Doc. no. 18) granted authority to the city of New Orleans to move the levee line in front of Marine Hospital Reservation outward and gave the city a strip through this reservation 110 feet wide for street purposes (Front Street) provided that the inner line of said street should not be nearer than 8 feet to the hospital fence.

The City was authorized to use or convey a grant to other parties for use of this street for railroad purposes provided a railroad yard was not located within 1000 feet of the hospital reservation.

The area within the fenced-in portion is approximately 17 acres. If the area between iron fence along river front and the top of the levee were added the area would be approximately 23 acres, which is the area mentioned in some of the old records.

The assessed valuation of adjacent property without waterfront right is $15,000.00 a city square. The government property is about 6 squares. About a year ago the Government land was valued by real estate dealers at $400,000.00, including waterfront rights. Just what rights the Government has in the waterfront to convey to other parties, if the land should be sold was not ascertained. The grant to the city of the street rights through the property would evidently eliminate that area but it is probable that the wharfage rights along the levee still belong to the government.

(2) History.

As far as can be learned relief for sick and disabled seamen at New Orleans, Louisiana, in contract hospitals, wasfurnished by the Government as early as 1802.

A marine hospital was authorized and erection be gun in 1837 and occupied in 1849. This was a brick building with a capacity for 269 persons and was situated on the Algiers side of the River at McDonough, just above the parish line in Jefferson and occupied a square measuring 350 feet each way and was Gothic in style of architecture. The cost of the building is given as $130,000.00. It was used until 1855 when it was abandoned as unsafe owing to the encroachment of the Mississippi River. In 1866 the hospital was undermined and carried into the river and the old sire is now under water about 200 feet distant from the river bank.

In 1855 a site for a second marine hospital waspurchased for $12,000. consisting of a square of ground containing about five acres and located at the corner of what is now Tulane and Broad Streets. It wasbuilt largely of iron, was in the Roman stule of architecture and fireproof. The unfinished building cost $530,090.84. It was never finished or used as a hospital as the site was swampy and considered unhealthy. Work on it was stopped just prior to the Civil War in 1861 and in 1873 Congress authorized its sale. It was sold to the City of New Orleans in August 1896 for the sum of $25,000.00.

This building wastorn down by the city authorities in 1913 and the house of detention for the city now stands on its site. Owing to city improvements this land is now high and dry and an admirable site for hospital purposes.

The patients of the service were cared for at the Sister's Hospital, Dieu for many years, and afterwards at the Tinro Infirmary.

An appropriation was made by Congress of $100,000.00 on August 7th, 1882, for the construction of a pavilion hospital at New Orleans and this building with the omission of the center ward was completed and opened for the reception of patients on April 21st, 1885. The center ward was added at acost of $10,000.00 in December 1891. The grounds were filled and

graded in 1896, and an operating and dressing room building was added to the center ward in 1903. 43

(3) Need for a Marine Hospital.

New Orleans is one of the most important shipping ports in the United States, ranking next to New York, and a hospital for the relief of sick and disabled seamen will always be needed here.

(4) Adequacy of Plant.

The plant as a whole is very old and in poor structural condition, and its arrangement not one that can be adapted to modern hospital needs or economical administration.

As this is the second largest shipping port in the United States, with a large and constantly growing demand for relief for sick and disabled seamen, a modern hospital of not less than 100 bed capacity is required, and should be located on the present site.

The surgeons' residence and the Passed Assistant Surgeons' residence and the present laundry building could be retained in their present location, but new quarters for attendants should be provided, as those at present in use are poor and expensive of upkeep. The estimated cost of the improvements needed is $350,000.00.

(5) Acquisition or Disposal of Land.

Although the present site is at a considerable distance from the business center of the city, it is doubtful if as desireable a location could be secured at a more central point. It is recommended that the present reservation be retained.

(6) Future Development or Disposal of Plant.

The immediate construction of a new modern hospital building of 100 bed capacity has been recommended to replace the present unsatisfactory wooden structures. It is believed that a hospital of this capacity will meet the needs of the station for a considerable period. Further extension should be provided for by additional buildings and the proposed plant should be laid out so that such extensions can be readily made.

II
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

* * * * * * * * * * * * * * *

(1) Appropriation for Repairs and Preservation of Public Buildings (for details see appendix A)	$5075.00
Total estimated cost of work recommended.	
(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)	7255.00
Total estimated cost of work recommended,	
(3) Legislative Appropriation for New Construction, (for details see appendix C)	352,200.00
Total estimated cost of work recommended.	

(4) Appropriations for Administrative Equipment,
(for details see appendix D)
Total estimated cost of items recommended, 5441.00

TOTAL $369,971.00

(5) Personnel. Adequate.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, Administration Building, Wood frame 2 story and attic on brick piers, Slate roof. Clap-Board exterior, plaster walls and ceilings painted. Pine base and trim, painted. 3¼" D & M floors, except in toilet room which is terrazzo. Heated by stoves and grates, Electric lights, Floor area, 3360 square feet.

Building No. 2, Passed Asst. Surgeon's Residence, Wood frame two story, brick piers. Clap-board exterior, slate roof. Plaster walls and ceilings, painted. Pine base and trim painted, 3¼" D & M floors. Heated by stoves and grates, electric lights, floor area, 2560 square feet.

Building No. 3, Kitchen and Attendants' Quarters, Two story brick superstructure, Slate roof, Plaster walls and ceilings, painted, Pine base and trim, painted, 3¼" D & M floors, Heated by stoves and grates, Electric light, Floor area 2260 square feet.

Building No. 4, East Ward, One story wood frame on brick piers, Clap-board exterior, Asbestos shingle roof, Main ward room has exposed rafters and roof trusses, painted. Plaster side walls painted. All other rooms have plaster walls and ceilings painted. The toilet rooms have mosaic tile floors and marble base and wainscot. All other rooms have rift hard pine flooring. Pine base and trim, painted. Floor area 4661 square feet.

Buildings No. 5 & 6, Center and West Wards, are of the same type of construction and finish as No. 4, except that operating room and surgical dressing room has porcelain tile floor and base. Floor area 5833 and 4661 square feet respectively.

Building No. 7, Surgeon's residence, Two story wood frame on brick piers, Clap-board exterior, slate roof. Plaster walls and ceilings, painted, Pine base and trim, painted. All floors are 3¼" D & M hard pine. Heated by stoves, electric lights, floor area 3800 square feet.

Building No. 8, Laundry and Power House, One and one-half stories, brick superstructure with slate roof. Exposed interior brick walls are painted. Cement floor in all rooms. Steam heat and electric light. There is a wood frame addition to this building covered with galvanized corrugated iron, which has no interior finish and no paint. Has plank floor and is used for boiler room stores.

Building No. 9, Disinfecting and Paint shop. One story wood frame, covered with galvanized corrugated iron. Has cement floor in disinfecting part, plank floor in the paint shop. No heat in the paint shop.

Electric Light. Floor Area 545 square feet.

44

Building No. 10, Asst. Surgeon's residence. One story wood frame on brick piers, Clap-board exterior, Asbestos shingle roof, Plaster walls and ceilings painted. Pine base and trim painted. Heated with stoves and grates, Electric lights, Floor area, 1840 square feet.

Building No. 11, Carpenter shop, One story wood frame on brick piers, Clap-board exterior, Shingle roof. No interior finish, wide boards for floors. No heat. Electric lights. Floor area 783 square feet.

Buildings Nos. 12, 13, 14, 15, & 16. Attendants' Quarters, are one story wood frame on brick piers. Clap-board exterior, Shingle roof. D. & M. hard pine floors. Heated by grates. Electric lights. Each has a floor area of 450 square feet.

Building No. 17, Necropsy House, One story wood frame on brick piers, Clap-board exterior, Shingle roof. Plaster walls and ceilings, painted. Cement floors and base. No heat, Electric lights. Floor area 225 Sq.Ft.

Building No. 18, Stable and Stores for Unserviceable property. One story wood frame on brick piers, Clap-board exterior. Shingle roof. D & M pine walls and ceilings, painted. 2" plank floors. Unfinished left over horse stalls. Floor area 1300 square feet. There is a shed lean-to at the east end of the stable, of planed boards and battens, Tin roof. Rough plank floor on sleepers on the ground. No heat, electric light in the stable only. Floor area 1200 square feet.

Building No. 19, Lodge at entrance gate. One story brick superstructure with tin roof, plaster walls and ceilings, painted. 3¼" D & M floors. Stove heat, electric lights, floor area 224 square feet.

There are two tanks on a tower in the rear of building No. 8, The lower portion of this tower has been housed in and two rooms formed. One used as a bathroom for attendants is equipped with a tub and hot water tank. The other room is used as a trash room. The tanks are not in use and are to be removed. In this event these two rooms should be removed and bath room facilities supplied near the present attendants' quarters.

(2) Offices.

Surgeon's Office. Located in the southwest corner of the first floor of the Executive Building is a large well lighted room and adapted for the purpose. The furniture is old and worn and a general new equipment is needed.

Pharmacist's Office, Located across the hall from the surgeon's office, is a well lighted room of about the same size and also in need of new furniture and equipment.

(3) Visitors' Reception Room.

None. Visitors are received in the hall of the executive building and in the wards at certain hours and days of the week. This arrangement is satisfactory.

(4) Examining Room.

No special room for this purpose and none needed at present. Patients

are examined in the out patient office, surgeon's and pharmacist's offices, the surgical dressing room and wards. There is a special room devoted to malarial work in the northwest corner of the first floor of the executive building. This is special work under the direction of Surgeon Von Esdorf.

(5) Kitchen and Diet Kitchen.

Kitchen. Located in the south end of the first floor of the two story brick kitchen building to the westward of the executive Building. It is a good sized room and well adapted to the purpose but some of the equipment is old and needs renewal. A new gas and a new coal range are needed.

Diet Kitchen. None. Food is carried to the ward dining room in trays and there is no method of warming or keeping food warm after it is taken from the kitchen. There is no space for diet-kitchen.

(6) Pantry and Food Storage.

A A pantry room adjoins the kitchen between it and the attendants' dining room. There is an ice box in the adjacent hallway and a room at the west end of the patients' dining room is used for food storage.

(7) Store Rooms.

Store rooms for medical and hospital supplies, Furniture and general supplies are located in the east ward; for bedding over the attendants' dining room; for records over the hall of the kitchen building; for engineer's and general supplies on the second story of the power house; for paints, oils, etc., in the rear of the disinfecting building and for unserviceable property in a shed at the rear of the stable. These rooms are considered inadequate by the officer in charge and a special storeroom building is desired.

(8) Quarters for Officers.

Surgeon's Quarters. Located in a two story frame building to the westward of the kitchen building. On the first floor of the main part there is a parlor, library, dining room and bath room, and in the extension at the rear a vestibule pantry, dish closet, kitchen and servant's room. On the west side of this building and connected to it is a small one story frame structure used as a bed room.

On the second floor are the following rooms; three bed rooms, a hall and bath room. These quarters are fairly furnished but some new equipment is needed.

Passed Assistant Surgeon's Quarters. Located in a two story frame building to the eastward of the executive building. On the first floor there is a parlor library, two closets, a dining room, hall and kitchen. On the second floor there is one large bed room, two smaller ones, a long hall and a water closet and bath room at either end. These quarters are poorly furnished and some new furniture is needed.

Assistant Surgeon's Quarters. Located in a one story frame building to the northwest of the surgeon's house. This building was on the property when purchased by the Government. It has the following rooms,

Parlor, library, dining room, kitchen, pantry, bath room and two bed rooms.

The most of the furniture now in these quarters is owned by the Acting Assistant Surgeon who now occupies them. A new outfit is therefore needed.

Internes' Quarters. These consist of one room in the south end of the east ward; one in the south end of the center ward and a small dining room adjoining the attendants' dining room in the kitchen building.

The bath room on the first floor of the Executive Building is used by the two interns on duty here. Nothing is needed for the interns' quarters.

Pharmacist's Quarters. Located in the upper story of the Executive Building, and consist of the following rooms; parlor, dining room, kitchen, bath room and three bed rooms. These quarters are comfortably furnished.

The only entrance to these rooms is by the stairway leading from the main hall of the Executive Building. A separate entrance from the west side of the building could be made by placing a door at the side and a stairway leading directly to the upper floor and closing up the old stairway. This arrangement would secure more privacy for these quarters and lessen the noise from the busy executive floor beneath them.

(9) Quarters for Attendants.

Two attendants are quartered in room on the south side of the second floor of the kitchen building (cook and assistant.) One (the painter) is lodged in the small brick building at the entrance gate on Tchoupitoulas St. Ten are quartered in six old plantation buildings on the west side of the reservation. Three of these buildings consist of one room and three of two rooms. They are sufficiently furnished but lack proper bathing and toilet facilities.

Five attendants do not sleep on the reservation, viz, the engineer, driver, ward helper, clerk and night-watchman.

(10) Patients' Dining Room.

Located at the south end of the center and west wards. These are good sized rooms adjacent to the ward and sufficiently furnished.

(11) Interns' and Officers' Dining Room.

A small room adjoining the attendants' dining room on the first floor of the kitchen building. It is adequate for the purpose and sufficiently equipped.

(12) Attendants' Dining Room.

Located on the west side of the first floor of the kitchen building. It is a good sized room and sufficiently equipped with the exception of table linen which is urgently needed.

(13) Recreation and Smoking Rooms.

One room at the northwest end of the center ward is used for this purpose. The corresponding room at the end of the west ward is used for tubercular cases. Some other arrangement should be made for the care of tubercular cases, and this room restored to its original purpose, as the one room set aside for this purpose is inadequate for both colored and white patients. The equipment of the room in use is sufficient.

(14) Disinfecting Facilities.

In one small room in Bldg. No. 9, a Kenyon Francis cylindrical steam sterilizer with Formalin Ammonia attachment is located, beside a steam dry room, belonging to the laundry. The room is rather small for the sterilizer alone. The steam dry room should be moved to Bldg. No. 8, and part of the present paint shop in Bldg. No. 9 used for a clean room to be divided by a framed partition to separate the two ends of the sterilizer. The building is of unsatisfactory type of construction for permanent use, and should be superceded by a new building when the pavilion type of hospital can be superceded by more modern up-to-date hospital buildings recommended.

(15) Incinerators.

There are none. A coal burning water jacketed incinerator should be supplied.

(16) Disposal of soiled linen.

Removed from the wards in bundles and carted to the laundry. No. special containers used. Infected linen is soaked in carbolic solution, sent to the steam sterilizer and when necessary destroyed by fire.

(17) Laundry Facilities.

The laundry equipment is located in buildings Nos. 8 and 9 and consists of the following machinery in Bldg. No. 8 : Three wooden stationary tubs; 1 Troy L. M. Co. Centrifugal Drier; 1 galv. iron soap kettle, (old ash can) 2 Am. Mchy. Co. rotary washers; 1 Am. Machy Co. 108 mangle (new), 1 gas heated hand iron, and in building No. 9 a 4 track steam dry room 6'0" long. The dry room is a cheap small equipment built in a corner of the steam sterilizer room, which is very objectionable and unsanitary. There is in Bldg. No. 8 a lot of old pumping machinery which is no longer needed or used and which should be removed, a new cement floor laid and the steam dry room and mangle located in that space. The mangle at present, is in the ironing room and no space is now available for this purpose. A larger steam dry room should b e installed. The machinery is generally in good condition and is driven by a steam engine, which could economically be replaced by motor service.

(18) Operating and Surgical Dressing room Facilities.

Operating Room. This is a good sized room located in the southeast corner of the extension of the center ward and across the hall from the laboratory used in malarial work. This room has a good operating table and a fair equipment of tables, etc.

The washup sinks are located in this room. They are old and unsuitable. A new one with pedal or knee attachment is needed and if possible should be placed in the sterilizing room adjoining the operating room. Some better means of illumination for night work should be devised.

Sterilizing Room. This room is provided with dressing and instrument and water sterilizers. A utensil sterilizer should be added.

Surgical Dressing Room. Located across the hall from the sterilizer room. It is a small room and sufficiently equipped, except for washup sinks and cases for dressings. The sink in this room is old, with hand attachment and should be replaced by a larger one with pedal or knee fixtures.

(19) X-Ray Facilities.

The X-Ray apparatus is placed in a small room partitioned off from a portion of the east ward on the west side. It is fitted with a very complete Waite and Bartlett apparatus, and is said to be one of the best equipped X-Ray outfits in the South. New tubes and photo cabinets are needed.

Dark Room. A small room located in the southeast corner of the east ward, is used for this purpose and sufficient for present needs.

(20) Laboratory.

Consists of one medium sized room located in the southwest corner of the extension to the center ward and opposite the operating room.

It is at the present time largely used in malarial investigations as well as the ordinary clinical work of the hospital. Wassermans are sent to the Hygenic Laboratory in Washington, D.C.

This room has a fair equipment but a new sink and a new incubator are needed. The gas supply for sterilizing and incubator purposes is deficient.

(21) Dispensary.

Located in the northeast corner of the first floor of the Executive Building. It is a good sized room, well lighted and fairly equipped but needs a new prescription counter and prescription scales.

(22) Wards for Seamen.

There are three pavilion ward buildings but at present the main wards of only two of them are used for ward purposes. The main ward of the east ward pavilion is used for storage except a small portion which has been partitioned off for an X-Ray room.

Each of the pavilion ward buildings has a main ward 107 feet long by 28 feet wide, exposed on both sides with verandas 6 feet wide and open to the roof without ceilings.

The west ward is used for colored patients, both medical and surgical, and the center ward is used for white, both medical and surgical. 44

The wing extension of the west ward building, originally designed for a smoking room, is used for colored tubercular patients. White tubercular patients are cared for in a tent. Four tent houses should be provided for tubercular and contagious cases.

(23) Quiet Wards.

There are no rooms specifically set aside for this purpose. If not otherwise required the room assigned to Revenue Cutter Officers at the south end of the west ward building could be utilized.

(24) Wards for Revenue Cutter Officers.

One room at south end of west ward building is assigned for this purpose. It has no separate toilet facilities and is inadequate.

(25) Toilet Facilities.

The toilet fixtures generally need overhauling in the following particulars. New vitreous urinals should replace enameled iron latrines in two hospital wards (center and west). A new surgeon's washup sink in operating room. Larger sink in laboratory and surgical dressing room. The bath room under tank tower should be removed to a new building near attendants' quarters building and the present closet, and a new ample lavoratory outfit placed therein. The plumbing fixtures in Surgeon's, Passed Assistant, and Assistant Surgeon's Quarters are satisfactory. A new kitchen sink should be supplied for the pharmacist's quarters, and the bath room for interns in Bldg. No. 2 should be enlarged and the outfit include a laveratory. This can be easily done by enclosing part of the store room over kitchen. None of the plumbing is modern in the quarters mentioned but should with the exceptions noted, serve the present plant, Bath room and toilet facilities should be provided in a separate building near attendants' quarters.

(26) Portable Tubs.

There is one portable tub with rack in good order and sufficient for present needs. Not many cases of typhoid fever are admitted to hospital here.

(27) Padded Cells.

None. For the restraint of violent alcoholic or insane patients there is only an old Humane Restraint Apparatus, consisting of bed strap, wristlets, and anklets. There is no restraint sheet and no local arrangement with the city authorities for the care of such cases. A restraint sheet should be provided.

(28) Necropsy Facilities.

Building No. 17 is devoted solely to necropsy work and is adequate and satisfactory for all present needs.

(29) Isolation Facilities.

There are no special isolation facilities. Smallpox cases are sent to city institution. Other contagious cases are taken care of in the general wards or in tents. Four tent houses should be provided for the housing of tubercular and contagious cases.

(30) Out Patient Office.

Located in the southwest corner of the old Post Office Building on Canal Street. There is a portion of a hall used as a reception room and one large room used as the office proper. These rooms are dark, gloomy and in bad repair. The most of the furniture is old and the property of the custodian of the old Post Office. If the office is continued in its present location, the walls and ceiling should be painted in lighter colors and new furniture and new linoleum for the floor provided.

(31) Floor Space.

In the hospital group proper, namely, the Executive Building, the three pavilion wards and the kitchen building, the total net floor space is as follows:

Basements - - - - - - - - - - -	none	
First Floors, - - - - - - - - -	16600	Sq.Ft.
Second Floors - - - - - - - - -	2648	"
	19248	"
Total Hall Space, - - - - - - -	1927	"
	21175	"

In this group the total net floor space for hospital use is	78%
For quarters (except halls) is	13%
For hall space (including quarters) is	9%
	100%

The Surgeon, Passed Assistant Surgeon, Assistant Surgeon and several of the attendants are provided with quarters in separate buildings having floor space as follows:

Surgeon' Quarters	3800	sq.ft.
Passed Assistant Surgeon's Quarters	2560	"
Assistant Surgeon's Quarters	1840	"
Buildings for Attendants' Quarters	2100	"
	10300	"

(32) The Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 61 beds, maximum 74. These are accommodated in 2 large and 2 small wards. Additional patients can, in this climate, be cared for in tents or tent houses. The capacity of the hospital as figured above does not include the east ward which is used for storage purposes.

On a normal basis each patient has 100 sq. ft. of floor space and 1700 cubic feet of air space computed on a height of 16½ feet to eaves. The two main wards are open to the roof.

(iv) Lecture Facilities.

There are no general lecture facilities. Besides some six lecture rooms, there are two auditoriums. These auditoriums seem to be taken up most of the time. Many extra seats could be provided by provided for the seating of lecturers and auditorium seats.

(v) The Second Floor.

Located in the southeast corner of the old Post Office Building on Second Street. There is a portion of a hallway on a corridor from the main lobby room and the office proper. These rooms are dark, gloomy and in bad repair. The area of the laboratory is not in the proper of the building at the first floor. If the office is located in the primary laboratory, the walls are moving should be placed so longer notice not the condition not see [illegible] the Dean pro-vide.

(vi) Floor Space.

In the Dental School proper, usually, the Dentistry Building, and there provides space, and the lecture facilities, the total net floor space is as follows:

Dentistry [illegible]	[illegible]
First Floor, [illegible]	[illegible] sq. ft.
Second Floor [illegible]	[illegible] "
[illegible]	[illegible] "
Total Hall Space, [illegible]	[illegible] "
	[illegible] "

In this group, the total net floor space for hospital [illegible] for operative Dentistry Medical [illegible] for hall space [illegible] [illegible] [illegible]

The Dental Hospital Building, Dentistry Building and several of the dispensaries are located with members in several buildings having floor space as follows:

Surgeon' Quarters	[illegible] sq. ft.
Tenant Assistant Surgeon's Quarters	[illegible] "
Interns' Quarters	[illegible] "
Nurses' Home for Assistants' Quarters	[illegible] "
	[illegible] "

(vii) Are the Facilities All Equal Alike.

The total dental capacity of the hospital is 11 hall, [illegible] 11. Four are accommodated in 1 large and 2 small wards. Additional provision may be made already, so much for is [illegible] or less [illegible]. The capacity of the hospital as indicated on figures above does not include the dual wards which is used for [illegible] purposes.

In a normal health year patient has 40 sq. ft. of floor space [illegible] [illegible] of air-space required or a height of [illegible] feet to [illegible] [illegible] [illegible] [illegible] [illegible]

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913 and 1914, and also for the period from July 1 to December 31st for the calendar years 1913 and 1914.

	FISCAL YEARS			July 1st to Dec. 31st.	
	1909	1913	1914	1913	1914
No. days hospital relief furnished	12627	14747	14820	7352	9048
Daily average hospital patients	34.7	40.4	40.7		
Total daily cost per patient.	----	$2.36	$2.31		
No. of hospital patients.	431	454	457		
No. of outside patients	1343	1185	1262		
No. of times treated	1841	2164	2386		

On February 21, 1915 there were 63 patients in the hospital of whom 14 were chronics, and 4 were tubercular patients. Of the 63 patients 38 were white and 25 colored. The maximum daily number in the hospital during the past 8 years was 67 in January 1915, minimum 19 in September 1907.

The number of hospital days relief furnished in 1914 was about the same as during 1913 but 17% greatertban in 1909. For the first six months of the present fiscal year it has been 23% greater than for the same period of the fiscal year 1914. The number of outpatients has decreased slightly in the last five years while the number of times treated has increased 30% in the same period.

(34) Ambulance Service.

The station has a 2 horse ambulance which is driven with one horse and used for nearby calls only. Other service is furnished by private parties under contract at $5.00 per trip. Facilities adequate.

(35) Heating, Power Plant and Ventilation.

There is no general heating plant though one is badly needed. All buildings are heated either with open grate fire places or stoves which are unsatisfactory, dirty and costly. Water for ward bath tubs is heated by coal burning water heaters, which also heat water in H. W. radiators in the toilet and bath rooms of these wards.

A central heating plant could be established by adding one more boiler in Bldg. No. 3 to the present equipment and steam supplied under reducing valve for all buildings requiring heat or by placing local independent hot water heating apparatus in the larger buildings, and steam from present boiler to others. The present boiler has 100 HP capacity, while only 1-15 HP engine and a steam sterilizer is now supplied with steam.

(36) Illumination.

All buildings requiring light are supplied with electric lights which are generally satisfactory except that the wards should have ap-

proved hospital type of fixtures instead of drop cords and open lights. All wiring is in new steel conduits. Additional fixtures are required in operating room.

(37) Decoration.

There is no definite scheme of decoration though all buildings that have painted interiors are neatly painted in satisfactory colors, the wards being in light colors, especially the operating suite which is white enamel, and is very satisfactory. The wards which have open rafters should be ceiled and covered with compo boards and painted light cream color.

(38) Telephone and Call System.

There is one telephone with one extension direct connected to city exchange (Bell system). The station has an intercommunicating telephone system of ten stations in poor condition. Needs thorough overhauling.

There is no call bell system but a portable watchmen's system of twelve stations is provided.

(39) Ice and Refrigeration Facilities.

There is no refrigerating plant and none is needed. Artificial ice is supplied as needed which is satisfactory.

(40) Water Supply and Fire Protection.

Water for all purposes is obtained from city main in Tchoupitoulas Street through 4 inch connection with meter box in sidewalk, thence by 2" line to reducing valve at laundry building and by connecting lines to the various buildings. Supply is ample and quality good. Pressure is 65 to 70 pounds. Source of city supply is Mississippi River. Water is filtered and treated.

The supply to plumbing fixtures passes through reducing valve but supply for yard hydrants does not and piping system is separate from service supply. Both supplies are metered and there is no by-pass at meter.

There are numerous one-way 2" fire hydrants well distributed about the grounds and connected with 2" main, city pressure. In addition there is one two-way city fire hydrant, 2½" hose connection, within the grounds in the rear of the buildings near the laundry. This hydrant is direct connected to city main by separate 4" pipe line.

There are three two-way city fire hydrants on Tchoupitoulas Street opposite the reservation boundry. City fire engine house is 5 blocks away.

The station has two wheel hose reels with a total of 150 feet of 2" rubber hose. There are 12 chemical fire extinguishers, 3 gallon Underwriter type well distributed. The number of fire extinguishers is insufficient and six more should be supplied. The amount of hose is entirely inadequate and 400 feet of 2" linen hose or cotton rubber lined should be supplied together with 4 new nozzles.

In addition each of the three wards should have a hose reel in the building with 100 feet of 2" linen hose and nozzle attached to fire supply line. Similarly the Executive Building, each of the 3 quarters, the kitchen building, laundry building and the stable should have a hose reel with 50 feet of 2" linen hose and nozzle. The 2" fire line mains will have to be extended to these buildings.

(41) Fire Alarm System.

There is one bell in rear of Executive Building which is struck by hand. A second bell is being purchased to be located in the vicinity of the wards and is needed. Fire signals can be given by steam whistle but steam is only on 3 days a week so this method is of no value.

City fire alarm box is just outside entrance to grounds on Tchoupitoulas Street. Drills are held weekly.

Facilities adequate.

(42) Sewer and other Drainage.

Sanitary sewerage is discharged into 8" city sewer in Tchoupitoulas Street, through terra cotta and cast iron mains leading to the various buildings.

Storm water is discharged from various points on the reservation through open gutters and pipe drains into the gutters of the streets bordering on the reservation.

The city storm sewers have not yet been extended as far as the reservation so that this is the only method practicable.

It results in water standing in the gutters and should be abandoned whenever it is possible to connect with the city system.

(43) Streets, Roads, Walks and fences and grounds.

The entrance to the grounds is on Tchoupitoulas Street in the rear of the buildings where a shell driveway in good condition connects with the various buildings. Adequate concrete walks and wooden passageways in good condition connect the various buildings and parts of the grounds.

The reservation, except on the river front face is inclosed by a brick wall in good condition. There is a driveway and 2 pedestrian entrances on Tchoupitoulas Street with iron grille gates.

The water front boundry has an iron picket fence with one pedestrian entrance which is not used as there is no street on this front. It needs painting badly but is otherwise in good condition.

A wood post and wire fence separates the area used as a garden from the rest of the reservation and there are wire fences enclosing chicken yard. These fences have never been painted and are not pleasing. Painting or whitewashing is required.

There is a brick sidewalk outside the station wall on Henry Clay Avenue and Tchoupitoulas Street with a 60 foot return on State Street. There a

is a cinder and dirt sidewalk on State Street and no sidewalk along the river front fence.

The gounds are well laid out with shrubbery and trees, are well cared for and present a pleasing appearance. Approximately 5½ acres of the reservation is a vegetable garden operated by private parties, the Government retaining a part of the produce.

Facilities adequate and in general in good condition.

(44) Wharves, Sea Walls, etc.

None. The river front is protected by the levee of the city. A portion of the area between the river front fence of the reservation and the levee is used by the City for the tracks of the Public Belt System under grant by act of Congress. The Government probably owns wharfage rights on levee in front of its reservation. (See Section I, Paragraph One.

(45) Live Stock, Vehicles, etc.

The station has one horse, 5 years old and in good condition; one heavy wagon; one light wagon; one horse lawn mower; all in good condition one 2-horse ambulance (used with one horse); one dump cart in fair condition; and one old ambulance wagon in poor condition. The latter is not required. Facilities adequate.

(46) Personnel.

There is on duty at this station three commissioned officers; one surgeon; one Passed Assistant; one Assistant Surgeon; two Acting Assistant Surgeons; two interns; one pharmacist; and nineteen attendants classed as follows:

1 Clerk
1 Engineer
3 Nurses
2 Cooks
1 Carpenter
1 Painter
1 Launderer
1 Driver
1 Nightwatchman
1 Messenger
1 Hallman
1 Gardener
1 Ward Helper
3 Yardmen.

(47) Records.

The records are properly kept but on account of filing facilities it is not possible to keep them arranged in good order. The clinical records are rather brief and incomplete.

(48) Books.

There are a few modern medical books in the station library, but the majority of the books on the station are old and of little use for reference.

A new dictionary is needed for office use.

(49) Purchase of Supplies.

Subsistence and fuel are purchased on yearly contract obtained in the usual manner and the method is satisfactory. Purchase on three months accepted proposal would have no particular advantage. Butter and eggs are now purchased in open market and the use of this method for the other articles required would be advantageous.

There are a few modern medical books in the station library, but the majority of the books on the premises are old and of little-use for reference.

A new dictionary is needed for office use.

(4) Furnishings of Quarters.

Bookshelves and tool are permanent on yearly contract although in the usual manner are the method is satisfactory. Furniture on hand in quarters provided would have no particular advantage. Water and sewage are provided in open market and the use of this method for the other stations requires would be advantageous.

APPENDIX A.

Marine Hospital at New Orleans, La.

Appropriation for Repairs & Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS.	Estimated Cost.
25	Enlarging toilet room for interns in Bldg. No. 2.	75.00
	Composition wood ceilings in wards of Bldgs. 5 & 6.	1800.00
	Removing tanks and trestles at rear of Bldg. No. 8.	200.00
28	Repairs to telephone system.	200.00
43	Painting fences.	200.00
40	6 chemical fire extinguishers, 3 gallons Underwriter type; 400 ft. of fire hose and 4# nozzles; 3 hose racks and hose for wards, 7 hose racks for other buildings, and extention of mains	1100.00
8	Outside stairs and entrance to Pharmacists Quarters.	400.00
		~~5075.00~~
		4075.00

APPENDIX A.

Service Department of Bar Harbor, Me.

Appropriation for Building & Preservation of Public Buildings.

* * * * * * * * * * * * * * * * * * * *

NOTE:The monthly estimates are in the order of labor relative importance and should be maintained throughout.

Paragraph of Report.	Item.	Estimated Cost.
3a	Enlarging toilet room for Ladies at Bldg. No. 2.	75.00
	Completing roof railings in rear of Bldg. No. 2.	[illegible]
	Removing frame and trellis at rear of Bldg. No. 2.	300.00
3b	Repairs to telephone screen.	[illegible]
4a	Painting dormers.	[illegible]
4b	4 electric fire extinguishers, 1 ceiling "Commercial type" 400 ft. of fire hose and 4 nozzles; 3 have been made and been for years. 7 have been made for other buildings, and protection of mains	1150.00
8	Storage shelve and partitions in Pharmacists Quarters.	[illegible]

H07:00

APPENDIX B.

Marine Hospital at New Orleans, La.

Appropriation for Mechanical and Electrical Equipment.
* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS.	Estimated Cost.
18.	Surgical washup sink in sterilizing room to replace the old and inadequate ones now in use in operating room.	$100.00
18.	One surgical washup sink in surgical dressing room to replace present old lavatory.	100.00
35	New E. I. kitchen sink for Pharmacist's quarters replacing present worn out one.	25.00
	New lavatory in Interns' toilet room in Bldg. #2.	30.00
35	Adding one new water tube boiler to present plant and extending steam heat to buildings Nos. 1, 2, 3, 4, 5, 6, 7, & 10. or local hot water heating apparatus.	7000.00
		$7255.00

APPENDIX X.

In the Department of New Orleans, La.

Appropriation for Mechanical and Electrical Equipment.
* * * * * * * * * * * * * * * * * * * *

ITEMS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS.	Estimated Cost.
18.	Surgical washing sink in sterilizing room to replace the old and dangerous one now in use in operating room.	$[illegible]
14.	One surgical washing sink in surgical dressing room to replace present old lavatory.	$[illegible]
25	New E. I. kitchen sink for Pharmacist's quarters replacing present worn out one.	$[illegible]
	New lavatory in laundry' toilet room in Item. 4b.	$[illegible]
32	Adding one gas water heater to present plant in and exhaust steam heat in buildings Nos. 1, 2, 3, 4, 5, 6, 7, & 10. or lease hot water heating system.	$[illegible]
		$[illegible]

APPENDIX C.

Marine Hospital at New Orleans, La.

New Construction.

* * * * *

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report	ITEMS.	Estimated Cost.
25.	New toilet building located near attendants' quarters having 1 tub, 2 lavatories, and the closet at present on a porch room of Building No. 12 placed therein.	$1200.00
22 & 29	4 tent houses.	1000.00
	New hospital building for 100 beds including hospital equipment and improvement to plant.	350,000.00
		$352,200.00

APPENDIX C.

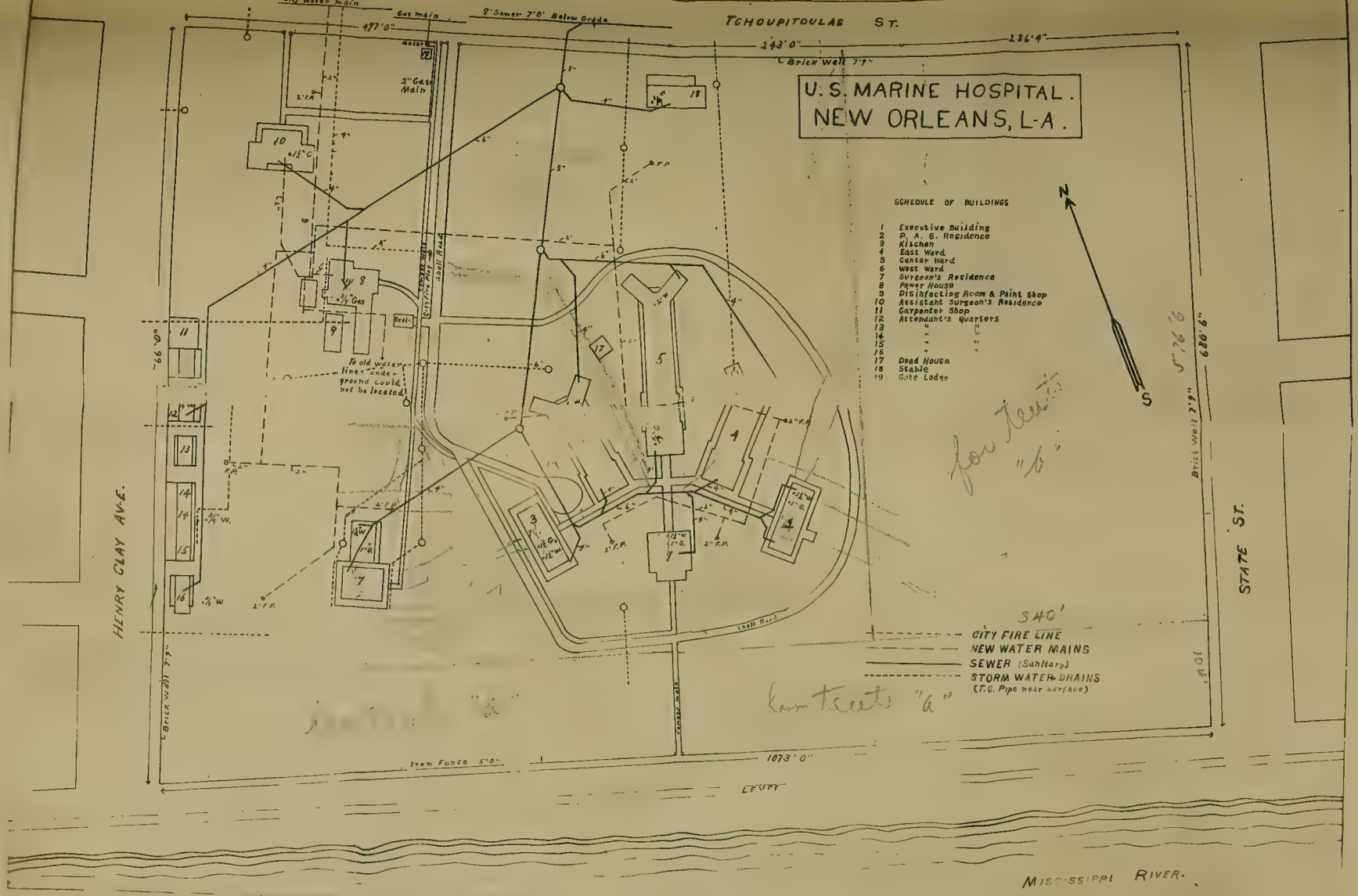
Ice Service Supplied at Our Stations, &c.

Administrative expenses.
* * * * * * *

ADMINISTRATIVE expenses required.

(See administrative items included in the report.)

Paragraph of report.	Item.	Amount.
[illegible]	Office (out patients).	[illegible]
3	Office (hospital)	[illegible]
22	Wards	[illegible]
32	Operating Room	[illegible]
41	Dispensary	[illegible]
54	Surgical Dressing Room	[illegible]
[illegible]	Secretary	[illegible]
17	X-Ray Room	[illegible]
5	Ambulance, Surgery	[illegible]
5	Test Kitchen	[illegible]
10	Eating Room	[illegible]
17	Laundry	[illegible]
8	Officers' Quarters	[illegible]
24	Gas stoves Laundry bought from Supplies Division for work in Wards, 3 & 4, and in operating room.	[illegible]
		[illegible]



Estimated tent capacity
427.

VIEWS OF
U·S·MARINE·HOSPITAL·

NEW ORLEANS · LA ·

ADMINISTRATION · BLDG ·

SURGEONS' · RESIDENCE ·

ASS'T · SURGEONS' · RES'D'E ·

EAST · ASS'T · SURGEONS' · RES'D'E ·

EAST · WARD ·

CENTER · WARD ·

[illegible] QUARTERS ·

GENERAL · VIEW ·

· VIEWS · OF · U·S·MARINE·HOSPITAL·

· NEW·ORLEANS · LA ·

· POWER · HOUSE ·

· GATE · LODGE ·

· ATTENDANTS' · QUARTERS ·

ATTENDANTS' · QUARTERS ·

· ATTENDANTS' · QUARTERS ·

· CARPENTER · SHOP ·

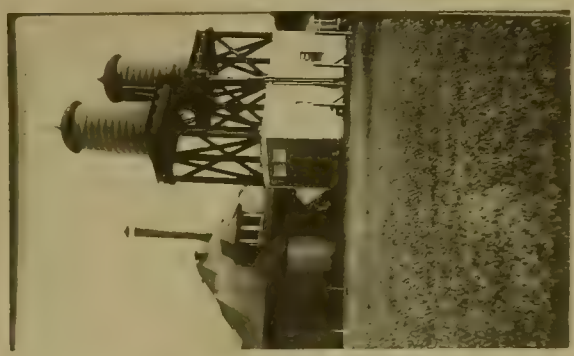
· STABLES ·

· WARD · VERANDA · COLORED ·

U·S·MARINE·HOSPITAL·

NEW·ORLEANS·LA·

ATTENDANTS'·BATH·ROOM·



ATTENDANTS'·BATH·&·TANKS·

STERILIZER·ROOM·

OPERATING·ROOM·

WARD·ROOM·WHITE·

WARD·ROOM·COLORED·

WARD·

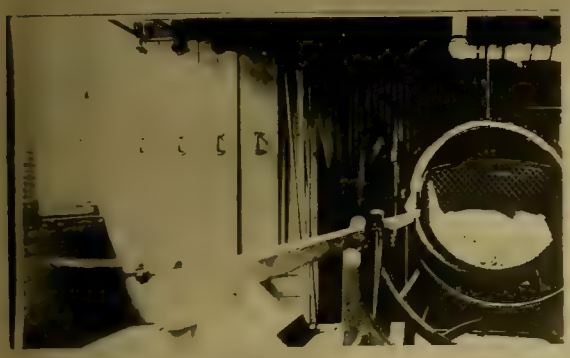
[illegible]·&·[illegible]·ROOM·

· VIEWS · OF ·
· U · S · MARINE · HOSPITAL ·

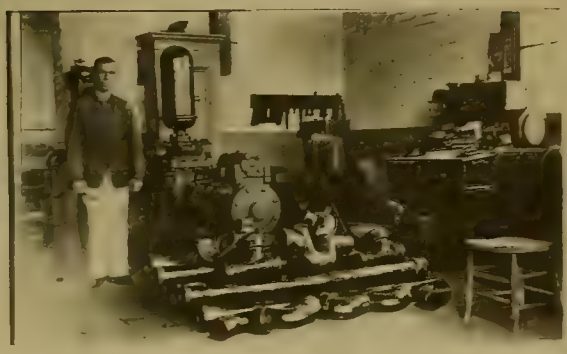
· NEW · ORLEANS · LA ·

· LAUNDRY · WASHERS ·

· LAUNDRY · MANGLE ·



· LAUNDRY · DRY · ROOM & STERILIZER ·



· OLD · MACHINERY · IN · LAUNDRY ·

JTC

October 13, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at New Orleans, La.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

PITTSBURGH, PA.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.S.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

UNITED STATES MARINE HOSPITAL, PITTSBURGH, PA.

Report of Inspection made November, 1914, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The hospital is located between the main part of the city of Pittsburgh and East Liberty on the southwest portion of the old Arsenal Reservation and is favorably situated, being bounded on the south by Penn Avenue, on the north and east by the remainder of the Arsenal Reservation, now used by the City authorities as a reservation park; on the east and west are 40th and 41st Streets. The grounds used for hospital purposes consist of two areas of an irregular, quadrilateral shape, are high, well drained and slope gently to the north and west, are well sodded and have quite a number of young Oriental Palms and Locust trees planted thereon. The site is favorable and situated so as to obtain fresh air and sunshine and overlooks the Allegheny hills and River to the north and east. A substantial stone wall, with coping, surrounds the reservation on the east, south and west sides.

(2) History.

A marine hospital was built in the early fifties and located near the Ohio River, in Allegheny, and abandoned in the late sixties. It was sold by Act of Congress in 1875 for the sum of $57,167.79. Thirty thousand dollars of this sum was used to purchase a site for a new hospital in the east end of Pittsburgh, in the then residential section. This was held for some years and then disposed of and a portion of the old Arsenal site secured for hospital purposes.

After the first hospital was abandoned, sick and disabled seamen were cared for by contract with local hospitals for subsistence, lodging, medicines and nursing, the medical attendance being furnished by an officer of the Service. For many years this contract was made with the sisters in charge of the Mercy Hospital, Pittsburgh.

An appropriation having been made by Congress of $135,000.00 for the erection of a Marine Hospital at Pittsburgh, plans and specifications were prepared, bids invited and opened on August 20, 1908.

The proposal of Henry Shenk and Sons of Pittsburgh, Pa., was accepted by the Department for the sum of $91,188.00.

The building was completed on July 31, 1909, and furnished and opened for the reception of patients on October 22, 1910.

The building is of the block type of hospital, is located near the center of the reservation, faces towards the south and consists of a basement, three stories and a partly furnished attic floor.

[illegible]

Report of Inspection made November, 1944, with recommendations as to policy to be pursued.

Water Supply & Fire Protection.

I.

[illegible]

[illegible]

Live Stock, Vehicles, etc.

The Department is limited between the main part of the site of Fremont and the Naval Library on the southwest portion of the old Fremont Hospital and is generally attached. Being however on the south by Pico Avenue, the north was met by the remainder of the Fremont Inspection, now used by the City authorities as a recreation ground, on the east lot was on the old Sixth Street. The grounds used for hospital purposes consist of an area of an irregular, quadrilateral shape, one half, all inclusive and adjacent to the north and west, the well houses and some pumping stations, Fremont Palms and Tamarix trees planted thereon. The site is partially and situated so as to obtain from water from [illegible] and altogether bills and water to the north and west. A substantial area [illegible], with topsoil, surrounds the protection on the east, south and west [illegible].

[illegible]

[illegible]

A marine hospital was built in the early Civilian and Inactive [illegible] Pico River, in Allegheny, and abandoned in the Iron months. It was [illegible] by Act of Congress in 1873 for the use of [illegible]. Early [illegible] [illegible] of this the [illegible] to purchase a site for a new hospital in the [illegible] and of Pittsburgh, in the Oak Hill institution. This was [illegible] [illegible] some years and then discovered of and a portion of the old Fremont site [illegible] for hospital purposes.

After the first hospital was abandoned, sold and disposed [illegible] [illegible] for by contract with local hospitals for [illegible]. [illegible] [illegible] and nursing, the medical [illegible] being furnished by an [illegible] [illegible] the service. For many years the hospital was made with the [illegible] [illegible] of the Navy Department, Pittsburgh.

An appropriation having been made by Congress of [illegible] for [illegible] of a marine hospital at Pittsburgh, plans and specifications [illegible] prepared, bids invited and opened on August 30, 1938.

The proposal of Henry Dorn and Sons of Pittsburgh, Pa., was accepted by the Department for the sum of $71,[illegible].

The building was completed on July 31, 1939, but furniture was [illegible] for the reception of patients on October 27, 1939.

The building is of the Mission type of hospital, is located near the [illegible] of the reservation, faces towards the south and consists of a basement, three stories and a partly furnished attic floor.

(3) Need for a Marine Hospital.

There does not seem to be much need for a marine hospital at this port at the present time, as the river commerce has diminished greatly during the past few years. Only 27 patients have been admitted to this hospital from July 1, 1914, to November 13, 1914, and four of these have lately been transferred from the Marine Hospital at Boston. The per capita cost of each patient is, therefore, large, as it is necessary to maintain the usual staff of officers and attendants. River improvements now in progress will require seven years to complete, so that no additional traffic can be looked for until this work is completed.

The station should be closed as a hospital as the service now being performed and the prospective demands in the near future do not warrant the expense incident to its operation. Such patients as require relief can be accommodated in local institutions. The building would be suitable as a base for public health work in that locality.

(4) Adequacy of Plant.

The plant is more than sufficient in size and equipment for present and prospective needs.

(5) Acquisition or Disposal of Land.

No additional land is needed. There is sufficient space on the ground now used for hospital purposes for the erection of one additional building. If other buildings should be required, the area now leased to the city can be utilized. None of the land should be disposed of. The Government should retain its present right to take back the property leased to the city, if needed for hospital purposes.

(6) Future Development or Disposal of Plant.

There is no prospective need for increased hospital facilities. Although there is no present need for a hospital, the plant should not be disposed of and may be utilized, if desired, for other Service needs, such as a base for Public Health work.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended, $170.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see Appendix B)
Total estimated cost of work recommended,

of Need for a Service Hospital.

There does not seem to be much need for a service hospital at this time at the present time, as the City Hospital has established psychiatric services in the past few years. Only 27 patients were seen as against 1 in 1931 and from July 1, 1934, to November 30, 1934, and four of these have been transferred from the Service Hospital to Bedford. The psychiatrists of each province, therefore, have, so to be necessary to develop the usual staff of officers and attendants. Many improvements in patients will require some years to complete, so that an additional time can be issued for which this work is completed.

The system should be closed by a hospital on the service and psychiatrists and the preventive remedy by the social worker is not necessary expense insofar as its operation. Such patients as require to be accommodated in local institutions. The hospital staff to provide a bed for psychiatric health work in that locality.

Adequacy of Plant.

The plant is more than sufficient to allow use equipment for present and prospective needs.

Availability or Necessity of Land.

No additional land is needed. Every is sufficient space on the land now used for hospital purposes for the erection of new additional buildings. If other buildings should be required, they can be located by utility men on existing. Some of the land should be disposed of. The authorities should retain the present right to take back the property based on the city's needs for hospital purposes.

Future Development or Increase of Plant.

There is no prospective need for increased hospital facilities. Though there is no present need for a hospital, the plant should not be given up and may be utilized, if desired, for other service needs, such as home for public health work.

II.

Summary of Tentative Preliminary Estimates.

Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)

Total estimated cost of work recommended, $170.00

Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see Appendix B)

Total estimated cost of work recommended,

(3) Legislative Appropriation for New Construction.
(for details see appendix C)
Total estimated cost of work recommended,

(4) Appropriations for Administrative Equipment.
(for details see appendix D)
Total estimated cost of items recommended, $2,467.00

T O T A L - - - - - - - $2,637.00

(5) Personnel.

Adequate.

NOTE:- If this hospital is closed, as recommended in Section I, paragraph 3, the above expenditures will not be required.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1:- Hospital. Brick superstructure, with limestone sills and water table, basement. Three-story in front, four stories in rear. Tin roof with deck, plaster walls and ceilings, painted. Pine base and trim, varnished. Floors in corridors and toilet rooms are terrazzo with marble borders and base or wainscot; basement floor, cement. All other floors are rift hard pine. Steam heat, electric light. Floor area 23,296 square feet.

Building No. 2:- Storehouse. One story, brick, painted, no interior finish, brick walls and groined brick arched ceilings, painted, slate roof. Twelve inch plank floor, piazza four sides. No heat, electric light. Floor area 1,564 square feet. Repairs to gutters and drain spouts are needed.

Building No. 3:- One story, brick, painted; slate roof, piazza on four sides. Plaster walls and ceilings, painted, D & M pine floors. Stove heat, electric lights. Floor area, 2856 square feet. This building and part of the reservation has been leased to the City of Pittsburgh for children's playground. Building and grounds to be kept in repair by lessees.

(2) Offices.

There are two offices, a surgeon's and Pharmacist's, located on the first floor on either side of the main entrance of the building. These are large rooms, suitably furnished and are well adapted for office purposes.

(3) Legislative Appropriation for New Construction.
(for details see appendix G)
Total estimated cost of work recommended.

(4) Appropriations for Administrative Expenses.
(for details see appendix G)
Total estimated cost of items recommended. $1,[illegible]

T O T A L - - - - - - - - - - $[illegible]

(5) Personnel.

Administration.

NOTE:- If this hospital is closed, no recommendations in Sections I, [illegible] the above appropriations will not be required.

III.

RECOMMENDATIONS OF PLANS AND ESTIMATES [illegible]

(1) Buildings in General.

Building No. 1:- Hospital. Brick superstructure, with limestone [illegible] and water table, terrazzo. Interior-entry in front, four entries in rear, [illegible] wood porch, plumber walls and ceilings, steam. The two [illegible] [illegible], steam, fireproof to partitions and ceiling rooms and [illegible] [illegible] walls for patients, basement floor, concrete. All other floors are full tile. Floor beds, wainscots tiles. Floor [illegible] [illegible] wooden roof.

Building No. 2:- Storehouse. One story, brick, painted, on [illegible] [illegible], brick walls and ground brick exterior partitions, painted, [illegible] [illegible]. Walls and floor floors floor joists. No bed, [illegible] [illegible]. Floor area [illegible] square feet. Repairs to plumbing and brick [illegible] [illegible].

Building No. 3:- One story, frame, painted; slate roof, [illegible] [illegible] floor. Floors main and partitions, painted, 2 & 3 plus [illegible]. Floor [illegible], porcelain lights. Floor area, [illegible] square feet. Fire [illegible] [illegible] of the reservation has been issued to the City of Pittsburgh for [illegible] Plaintiff's Platform. Buildings will provide to be kept in repair by [illegible].

(2) Grounds.

There are two options, a surveyor's and Pennsylvania's, location [illegible] first floor on street side of the main entrance of the building. [illegible] are large rooms, suitably furnished and has will adapted for [illegible] [illegible].

(3) Visitors' Reception Room.

Is located next to the main stairway and elevator on the north side of the first floor and is suitable for the purpose, and if the hospital is maintained, should be furnished with a carpet or rugs, as it presents a bare and uninviting appearance at present.

(4) Examining Room.

There is no special room for this purpose, patients being examined in the Surgeon's office or in the surgical dressing room on the third floor of the building.

(5) Kitchen and Diet Kitchens.

The kitchen is located about the center of the building on the south side of the third floor and is furnished with the usual equipment. Some new utensils are needed to replace those worn out. Natural gas is used as fuel at a cost of 27½ cents per thousand feet and a gas range is the only one in use. The location of this room on the third floor is satisfactory to those in charge of the hospital as most of the odors arising from the cooking are confined to this floor and an electric dumbwaiter, running from the basement, solves the problem of transportation of kitchen supplies.

(6) Pantry and Food Storage.

Shelving for this purpose is placed along one end of the kitchen and two refrigerators are also in use. A pantry for dishes and sink and washer for cleaning them is located between the kitchen and attendants' dining room.

(7) Storerooms.

A large room in the northeast corner of the basement is used for the storage of medical and hospital supplies, and another room on this floor opposite the elevator shaft is used for kitchen and general storage purposes. They are ample for all needs.

(8) Quarters for Officers.

The Medical Officer in Charge occupies the Pharmacist's quarters on the east side of the first floor of the building. These quarters are well furnished and consist of the following:- 2 bedrooms, bathroom, sitting room, dining room, hall room and kitchen. The present Pharmacist on duty at this station, an unmarried man, occupies the room set apart for the Interns on the first floor in the northwest corner of the building. It is well furnished, has a convenient bath and toilet room and large clothes closet.

a) Visitors' Reception Room.

It located next to the main entrance and elevator on the north side of the first floor and is suitable for the purpose, and if the Department so contributed, should be furnished with a carpet or rugs, as it is now a bare and relatively dreary room at present.

b) Executive Offices.

There is no special room in this Building, Officials being assigned to the Director's office or in the unoccupied rooms on the third floor of the building.

c) Kitchen and Rest Rooms.

The kitchen on Special floor for janitor of the building on the north side of the first floor and is furnished with the usual equipment. The rest rooms are located to replace same now out. Alcohol gas is used as fuel at a cost of [illegible] per month for thirteen hour day a gas range is only one in use. The installation of this room on the third floor is satisfactory to system in charge of the heating as most of the heavy heating on the condition are equipment on this floor and an electrically [illegible] coming from the basement, without the problem of transportation of [illegible] [illegible].

d) Pantry and Tea Room.

Provision for this purpose is made along the wall of the [illegible] from refrigerators are also in use. A pantry for dishes and silver for cleaning them is located between the [illegible] and [illegible] room.

e) Storerooms.

A large room in the basement adjacent of the basement is used for [illegible] of medical and surgical supplies, and another room on the [illegible] opposite the elevator which is used for lighting and general [illegible] purposes. They are ample for all needs.

f) Conference Rooms.

The Medical Officer in Charge occupies the Personnel's quarters on the west side of the first floor of the building. Other quarters are [illegible] and occupied of the following:- 2 bedrooms, [illegible], sitting room, dining room, bath room and kitchen. The present [illegible] is very [illegible], in [illegible] and [illegible] the [illegible] on the first floor in the northwest corner of the building. It [illegible] [illegible], and a convenient bath and toilet room and large [illegible] [illegible].

(9) Quarters for Attendants.

Attendants quarters are located on the third floor, and in four rooms in the finished part of the fourth floor. These are sufficiently furnished and comfortable.

(10) Patients' Dining Room.

This room is located on the south side of the second floor next to the Revenue Cutter Officers' room and, except for the want of some minor equipment, is satisfactory and in good order.

(11) Interns' and Officers' Dining Room.

There is no special room for this purpose and at present the Acting Assistant Surgeon and Pharmacist take their meals in a part of the attendants' dining room which is screened off from the rest of the room, and the meals are served at different hours from those of the attendants.

(12) Attendants' Dining Room.

This room is in the southeast corner of the third floor and is satisfactory for the purpose but needs some new equipment in dishes, tableware and linen.

(13) Recreation and Smoking Room.

There is no special room for recreation purposes, but a large smoking room on the northeast side of the second floor serves this purpose for all convalescent patients. It is well furnished and comfortable.

(14) Disinfecting Facilities.

One American Disinfecting Co. steam disinfector, with formaldehyde and ammonia attachment is installed in a room for that purpose, in the basement. It is ample and satisfactory.

(15) Incinerators.

A gas burning incinerator, manufactured by the Incinerator Company of America, is located in the boiler room, which is not satisfactory. A coal burning, water jacketed incinerator should be installed if plant is continued for hospital purposes.

(16) Disposal of Soiled Linen.

Soiled linen is removed from the wards and rooms, bundled in sheets and given to the laundry which contracts for the service at the beginning of each year. The linen from infected cases, including tubercle, is, after removal from the wards, soaked in 1-20 carbolic solution, or passed through the steam sterilizer and then handed to the laundry. Sanitary baskets or bags should be used for carrying soiled linen from the wards and rooms.

(17) Laundry Facilities.

There are none. Laundry work is contracted out, which has proven cheaper and just as satisfactory as if done in the hospital.

(18) Operating and Surgical Dressing Room Facilities.

The surgical division here is very good. It is located on the northwest side of the third floor and cut off from the rest of the building by partition. There is a large operating room, a sterilizing and etherizing room, a surgical ward of seven beds for clean cases, a surgical dressing room, a lavatory with sinks, bowls, shower and toilet, and a large closet for surgical dressings and appliances. All of these rooms are well lighted, well equipped and sufficient for all demands. Adjoining this suite of rooms, and next to the main stairway, is a Surgeon's wash up room.

(19) X-Ray Facilities.

The X-Ray room is on the first floor adjoining the laboratory in the northwest corner. It is furnished with a Scheidel Western X-Ray and accessories and is sufficient for the needs of the hospital. A dark room is placed next to the X-Ray room. It should have its walls painted black instead of the light color now on them.

(20) Laboratory.

This room adjoins the X-Ray and dark rooms, is quite large, partly furnished, and is ample for ordinary clinical work of the hospital.

(21) Dispensary.

This large room is on the northwest side of the building opposite the Pharmacist's office, is fitted with handsome oak dispensing cases, placed on three sides of the room, marble topped dispensing counter, sink, etc., is well equipped and sufficient for all needs. A few shelf bottles are needed.

(22) Wards for Seamen.

Second Floor. There are two wards on this floor, one at each end of the building. Both wards are open on three sides and are light and airy. The normal capacity is 15 beds each, total 30, with a maximum of 34 beds.

Third Floor. There is one general ward on this floor, capacity 7 beds normally, maximum 7. This ward is adjacent to operating suite and was designed to be used for surgical cases. At present it is occupied by tubercular patients, there having been no surgical cases for some time. A room used as a detention ward is also located on this floor, capacity 2 beds.

Tubercular Wards. There is no special provision for tubercular patients, such cases being taken care of in one of the wards of the main building.

(d) Laundry Facilities.

There are none. Laundry work is performed out, mostly for private parties but not to satisfactory at it does in the hospital.

(e) Operating and Recovery Rooms (Surgical).

The surgical division here is very good. It is located on the second floor of the first floor and all are from the rest of the building by partition. There is a large operating room, a preliminary operating room, a surgical ward of eleven beds (or close beds), a surgical dressing room, a laboratory with sink, bowls, cabinet and racks, and a large closet for surgical dressings and appliances. All of these rooms are well lighted, well equipped and ventilated for air changes. Adjacent to the suite of rooms, and built in the same division, is a fracture's ward of [illegible].

(f) X-Ray Facilities.

The X-Ray room is on the first floor adjacent the laboratory in a convenient corner. It is furnished with a stationary machine and accessories and is sufficient for the needs of the hospital. A dark room is located next to the X-Ray room. It should have the walls painted instead of the light color now on them.

(g) Laboratory.

This room adjoins the X-Ray and dark rooms, is quite large, partly furnished, but is empty for necessary clinical work of the hospital.

(h) Dispensary.

This large room is on the northwest side of the building opposite the Physicians' offices. It is used as a dispensary and dressing room. There are five sinks of the room, with hyper [illegible] cabinets. The room is well equipped and sufficient for all needs. A few small changes are needed.

(i) Wards for Women.

Second Floor. There are two wards on this floor, one at each end of the building. Both wards are very on those side and light and airy. The normal capacity is 22 beds each, total 30, with a maximum of 33 beds.

Third Floor. There is one general ward on this floor, capacity 7 normally, maximum 9. This ward is adjacent to operating suite and was designed to be used for surgical cases. It formerly it is occupied by medical patients. There should be a clinical room for this floor.

There used as a dispensary room is also located on this floor, providing a bed.

Postoperative Cases. There is no special provision for postoperative cases, such cases being taken care of in one of the wards of the hospital.

(23) Quiet Wards.

There are no rooms specifically provided for this purpose. When not otherwise required, the room for Revenue Cutter Officers can be utilized as a quiet ward. Although such a room is desirable, there is no space available and, under present conditions, such a room is not needed.

(24) Ward for Revenue Cutter Officers.

One room on the second floor, with separate toilet and bath room, is provided for this purpose. It will accommodate a maximum of two persons and is adequate.

(25) Toilet Facilities.

Toilet facilities are modern, are ample and in good repair.

(26) Portable Tubs.

There are two portable porcelain lined bath tubs, but no racks are provided on them for raising or lowering patients when bathing is necessary.

(27) Padded Cells.

None are in use at this hospital. A restraint sheet should be provided.

(28) Necropsy Facilities.

A spacious, well appointed and equipped room in the basement, convenient to the elevator, supplies all needs for this purpose.

(29) Isolation Facilities.

There is no detached ward for contagious cases. A room with 2 to 3 bed capacity on the third floor is set aside as a detention ward for suspect cases. Smallpox cases are sent to city institutions. Under existing conditions, facilities are adequate.

(30) Out-Patient Office.

The out-patient office is located in the Ferguson Building on Third Avenue, Pittsburgh, on the second floor and consists of a waiting and dispensing room and a Surgeon's office. It is sufficiently equipped and suitable for the purpose. Four hundred and forty-eight patients were treated in this office last year, 738 times. Shelf bottles, tables, instruments, and some special appliances are needed.

(31) Floor Space.

Total net floor space, Main Building:-

Basement	4,558	square feet
First Floor	4,240	" "

[illegible]) Guard Service.

There are no prisoners specifically provided for this purpose. There is otherwise required, the room for Bureau Guards directly can be adequate as a guard room. Although such a room is desirable, there is no space available and under present conditions, such a room is not needed.

[illegible]) Room for Persons Under Civil Arrest.

One room on the second floor, with toilet facilities, is provided for this purpose. It will accommodate a maximum of ten persons [illegible] to months.

[illegible]) Toilet Facilities.

Toilet facilities are ample, are ample and in good repair.

[illegible]) Portable Tubs.

There are two portable porcelain lined tubs, but no extra provided on hand for relaying or temporary patients when laundry is necessary.

[illegible]) Bathing Facilities.

None are in use at this hospital. A treatment room should be provided.

[illegible]) Emergency Equipment.

A generator, well ventilated and equipped room in the basement, convenient to the elevator, supplies all needs for this purpose.

[illegible]) Isolation Facilities.

There is no isolated medical-surgical ward. A room [illegible] is [illegible] on the third floor is not suitable for use as a temporary isolation room for medical cases. Surgical cases are sent to city hospitals. Under existing conditions, facilities are adequate.

[illegible]) Out-Patient Office.

The out-patient clinic is located in the Surgeon Building on Bayou [illegible]. Physicians, on the ground floor and consists of a waiting and [illegible] room and a Surgeon's office. It is satisfactorily furnished and suitable for the purpose. Four doctors and [illegible] patients each [illegible] office the last year, 200 times. Small building, [illegible] good general appearance and condition.

[illegible]) Floor Space.

Total net floor space, Main Building:

Basement	[illegible] square feet
First Floor	[illegible] " "

Second Floor	4,760	square	feet
Third Floor	4,350	"	"
Fourth Floor	510	"	"
	18,618	"	"
Total hall space	4,678	"	"
	23,296	"	"

Total net floor space for hospital uses	65%
" " " " " living quarters (except hall spaces)	15%
" " " " " hall space (including quarters)	20%
	100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 39 beds for seamen, including 3 beds in Detention Ward, and one bed for officers of the Revenue Cutter Service. The maximum capacity is 44 seamen and 2 officers. On a normal basis, each patient has 83 to 99 square feet of floor space and 790 to 1260 cubic feet of air space. There are no accommodations for patients outside the main building.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914 and also for the period from July 1 to October 31, for the calendar years 1913 and 1914:

	Fiscal Years.			Jul 1-Oct 31	
	1909	1913	1914	1913	1914
No. days hospital relief furnished	2689	3945	2562	793	432
Daily average hospital patients	7.3	10.8	6.0	-	-
Total daily cost per hospital patient		$3.50	$5.02	-	-
Number of hospital patients	156	155	143	-	-
Number of out-patients	572	459	448	-	-
Number of times treated	858	657	748	-	-

On November 13, 1914, there were 6 patients in the hospital. Of these, one was a chronic admitted in 1912 and four were tubercular cases sent from the Marine Hospital at Boston, leaving only one who had been admitted through the local out-patient office. The present hospital plant was opened on October 22, 1910. Prior to that time, patients were treated at the Mercy Hospital in the city. The maximum number of daily patients given hospital treatment since 1910 was 24. Usually the maximum number has been from 10 to 15 and several times the minimum has been as low as one or two. Since 1902, the largest amount of hospital relief furnished was given in January of that year, a total of 1596 sick days for that month. During this period, as many as 42 patients were receiving hospital care at one time. Since 1903, the maximum number at any one time has been 25 to 30.

(34) Ambulance Service.

The service is procured under contract at a cost of $5.00 per trip. Present facilities are adequate.

Second Floor	4,780 square feet
Third Floor	4,380 " "
Fourth Floor	" "
	" "
Total hall space	" "
	" "

Total net floor space for hospital use

" " " " " living quarters (except hall space)

" " " " " hall space (including quarters)

(c) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 38 beds for women, including 2 beds in Delivery Ward, and one bed for children at the Children's Water Service. The maximum capacity is 44 women and 2 children. The average bed space, each patient has 61 to 77 square feet of floor space and 750 to 1000 cubic feet of air space. There are no accommodations for patients requiring the main building.

(d) Patient Attended and Costs.

The following table shows the patient attended by the surgeon for the fiscal years 1928, 1929, 1930 and also for the period from July 1 to October 31, for the calendar years 1930 and 1931:

	Fiscal Year.			Jul 1-Oct 31.	
	1928	1929	1930	1930	1931
Ave. days hospital patient remains	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Daily average hospital patients	7.7	10.4	8.1	-	-
Total daily cost per hospital patient		[illegible]	[illegible]	-	-
Number of hospital patients	130	318	144	-	-
Number of out-patients	271	440	444	-	-
Number of times treated	638	847	738	-	-

On November 12, 1928, there were 6 patients in the hospital. Of these, one was a diabetic admitted on 7/11 and four were maternity cases. Apart from the Marion Hospital at Marion, Lowndes County was the first to be served through the local out-patient clinic. The present hospital plant was opened on October 31, 1928. Prior to that time, patients were treated in the Nurse Maternal in the city. The maximum number of daily patients in the hospital treatment since 1928 has been 24. Usually the maximum number of beds (ips 17 to 22 and several times the minimum has been as low as 5 or 6. Since 1928, the largest number of hospital patients treated in a month in January at that year, a total of 144 was made for that month. During this period, as many as 42 patients were receiving hospital care at one time. Since 1928, the maximum number at any one time has been 25 to 30.

(e) Ambulance Service.

The service is provided under contract at a cost of $2.00 per trip. Usual facilities are adequate.

(35) Heating, Power Plant and Ventilation.

The building is adequately and effectively heated by direct steam radiation, supplemented by indirect steam radiation to all wards, the latter of which is rarely used as none but the coldest weather makes it necessary. Ventilation is through registers by natural draft to vent stack and ventilator in roof, which is adequate in all respects except that a deflector should be placed in the flue connection from the hood over kitchen range.

The elevator service from basement to third floor is by an Otis plunger type lift, ample in size and efficient in operation; the inclosure gates, however, do not open wide enough to admit patients on stretcher. These should be arranged by hinging all the inclosure across the front at each landing and at rear of first floor landing. A Burdett-Roundtree electrically operated dumbwaiter satisfactorily supplies all the needs of this service in a very satisfactory manner. There is no power plant and none is needed as there is no power machinery on the station.

(36) Illumination.

Illumination is adequate for all possible needs of the station, being combination gas and electric fixtures, open Holophane glassware, inverted for electric, upright for gas; wards have sidewall bracket fixtures in addition to drops.

(37) Decoration.

All walls and ceilings have been painted a sage green color, stippled flat finish. Under local conditions (where an unusual amount of smoke and soot begrimes everything with which it comes in contact), all walls should be enameled finish so that they can be washed clean, as the pores in stippled paint holds dirt against the most persistent scrubbing. The color is not the best for hospital purposes and when repainting is required, the colors should be in accordance with definite recommendations, outlined in general report.

(38) Telephone and Call Systems.

There is a Western Electric intercommunicating system connecting the various parts of the main building, installed when hospital was built, number of stations 12.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant and none is needed. Artificial ice of good quality is supplied and stored in refrigerators, which is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from 20" city main in Penn Ave. It is excellent

in quality and ample in quantity. The source is river water which is filtered by the city and refiltered by two Cummings Water Filters in the basement of the hospital. Pressure at hospital is from 70 to 75 pounds. The main to the hospital is 4 inch, reduced to 3 inch just where it enters the building on the front at the east end. There are two one-way 2½ inch connection fire hydrants, one in front and one in rear of main building. Within the building there are 5 hose racks, each with nozzle and 75 feet of 2" linen hose; one in basement and one on each floor. The station has no hose for the two outside fire hydrants. Nine chemical fire extinguishers are located in the main building; 3 in basement and 2 on each floor, except the fourth, where there is one. There is a city fire hydrant at the corner of 40th St. and Penn Ave., just outside the boundary wall. City fire engine house is 4 or 5 blocks away only. One additional chemical extinguisher is needed for old Arsenal building. Facilities are good and, with the exception noted, are adequate.

(41) Fire Alarm System.

There is a gong in the corridor of the first floor which is struck by hand. Facilities adequate.

(42) Sewer and Other Drainage.

Sewerage and storm water is taken care of in a combined system discharging through 8" vitrified trap to 20" city sewer in Penn Avenue. There is a manhole with running traps outside building. Facilities adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

A macadam road, with brick gutters runs directly in front of the building connecting the entrances to the grounds on Penn Ave. and on 40th St. This road extends on both sides and in the rear of the building where it is 30 feet wide. Roads are adequate and in good condition, except 100 feet on west side of building which will need minor repairs in the near future.

Walks. There is a brick sidewalk from entrance on 40th St. to front entrance of building running thence to entrance on Penn Ave. In excellent condition and adequate.

There is a concrete sidewalk on 40th St. outside the boundary wall that is in fair condition, although part of it has cracked badly. On Penn Ave., there is a brick sidewalk in fair condition. On 39th St., there is a concrete sidewalk in good condition.

Fences. A substantial stone wall with stone cap and stone posts at entrances incloses the reservation on 40th and 39th Streets and Penn Ave. It is in excellent condition and presents a pleasing appearance. There are two entrances, one on 40th St. and one on Penn Avenue. They have posts but no gates and none are needed. A third entrance on 39th Street leads to area leased to city.

[illegible] quality and supply in quantity. The sources to river water which is [illegible] by the city and [illegible] by the Pennsylvania Water Filtrers in the [illegible] of the municipal. Pressures at hydrants as from 50 to 60 pounds. [illegible] to the hospital is a fault, though a 6 inch pipe stops it entirely [illegible] building on the front at the main end. There are the supplies of [illegible] Filtration Buildings, one in Fifth and one in Penn at 14th Building. [illegible] the building there are 7 boiler rooms, each with mosaic and 75 feet [illegible] in length boiler, one in basement and one on main floor. The stacks [illegible] for the Pittsburgh Filtration Bureaus. Coal dumped from [illegible] are located in the main building 2 in basement and 2 on main floor. [illegible] the floors, stairs to see. There is a city fire department at the [illegible] of each ph. and Penn ave. Just outside the hospital main. [illegible] engine house is 4 or 5 blocks away only. The mechanical [illegible] is second for old Pennsylvania building. Facilities are good but [illegible] the exception noted, are adequate.

[illegible]) Fire Alarm Systems.

There is a good [illegible] of the fire alarm system in [illegible] and. Facilities adequate.

[illegible]) Sewer and Water Problems.

Sewerage and storm water is taken care of in a separate system [illegible] through [illegible] of the other sewer in Penn avenue. There [illegible] with vertical type pumping facilities. Facilities adequate.

[illegible]) Streets, Alleys, Sidewalks and Drainage.

A macadam road, with brick gutters and vitrified in front of the [illegible] connecting the entrance to the grounds to Penn Ave. and an alley [illegible]. Side walks on both sides and in the rear of the hospital [illegible] are in fair shape. Drains are adequate and in good condition. Although [illegible] on well made of building stone will need some repairs in the near future.

Walls. There is a brick chimney from refuse on Ward St. [illegible] and exterior of building needing tuck to pointing on Penn Ave. [illegible] construction and adequate.

There is a concrete sidewalk on Ward St. [illegible] in fair condition, although part of it has broken walls. On Penn [illegible]. There is a brick sidewalk in fair condition. On 37th St., there is [illegible] adequate in good condition.

Grounds. A substantial stone wall with iron fence and stone posts [illegible] the reservation on 6th and Penn Streets and Penn Ave. [illegible] in excellent condition and presently a planting equipment. There are [illegible] on 37th St. and one on Penn Avenue. They have grass [illegible] and some are present. A fairly extensive on both streets leads to [illegible] based on city.

The other boundaries, adjoining the city property used for playgrounds, are not fenced and no fences are needed.

Grounds. The grounds are well kept and their appearance is excellent. A portion of the reservation in the rear of the main building was leased to the city in 1912 at a nominal rental for park purposes only. There are no definite boundaries to the area leased, it being described as that portion not required for hospital purposes, but the area now being used is about 3 acres. One old arsenal building is included in the property leased. This property is kept up by the Play-Grounds Association and is in excellent condition.

(44) Sea Walls, Wharves, Etc.

None. No water front.

(45) Live Stock, Vehicles and Equipment.

There is no live stock or vehicles. The station has hand lawn mowers, one push cart and miscellaneous tools, etc. Facilities are adequate.

(46) Personnel.

There is one commissioned officer in charge, one acting assistant surgeon on duty at the city office, one Pharmacist and nine attendants, classed as follows:- 1 engineer, 1 cook, 1 day nurse, 1 night nurse, 1 watchman, 1 hallman, 1 gardener, 1 pantryman, 1 messenger.

(47) Records.

The hospital books and records, including the clinical records of the patients at this station are properly kept and up to date.

(48) Books.

The medical books in the hospital library consist of a few modern works on medicine, surgery and pathology, etc., and quite a number of old works not now of much value for reference purposes.

(49) Purchase of Supplies.

Supplies are purchased on yearly contract after advertisement, solicitation and proposal. Supplies delivered daily at hospital and expended for the most part on the same day. No particular advantage in accepting three months proposal, save increased clerical work. Cash system would have advantage of fluctuation in market prices in butter, eggs, etc.

The Labor Commission, utilizing the city property upon the plan[illegible] [illegible] are not charged and the classes are graded.

Gardens. The grounds are well kept and have approximately [illegible] [illegible]. A portion of the greenhouse in the rear of the main building was [illegible] to the city in 1917 as a medical dispensary for park purposes only. [illegible] are no patients admitted to the wards [illegible]. It would diversify [illegible] [illegible] portion not required for hospital purposes, but the area was [illegible] [illegible] in about 1 acres. The old armory building is included in the proper[illegible] [illegible] lease. This property is kept up by the Superintendent maintaining [illegible] [illegible] the expensive condition.

[illegible]) Use Public Conveyance, Etc.

None. No water trips.

[illegible]) Life Stands, Shelters and Equipment.

There is no life stand or shelter. The shelter has been [illegible] [illegible], one pad cart and miscellaneous tools, etc. Facilities are adequate.

[illegible]) Personnel.

There is one commissioned officer in charge, one acting assistant [illegible] on duty at the city office, one Commissioner and one attendant [illegible] [illegible] an emergency. I read, I day swim, I ability swim, I [illegible] [illegible], I knowing, I practice, I management.

[illegible]) Records.

The required books are present, including the attendance record. [illegible] [illegible] records at this substation are properly kept and up to date.

[illegible]) Boats.

The motion boats in the Central Library consist of a fire engine [illegible] on motion, nursery and [illegible], etc., and provide a number of [illegible] [illegible] are not yet at work due to [illegible] [illegible].

[illegible]) Concessions at Facilities.

Concessions are provided on strictly contract after advertisement, [illegible] [illegible] and prepared. Concession [illegible] daily at Schenley and [illegible] [illegible] for the most part on the same day. No particular difficulty is ex[illegible] [illegible] there under previous, more liberal conditions very. Such arrangements have advantage of [illegible] in market prices in bulk, etc., etc.

APPENDIX A

Marine Hospital at Pittsburgh, Pa.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
35	Deflector in vent from kitchen range smoke hood	$10.00
35	Make rear gates to elevator enclosure first floor landing open full width of elevator for admission of patients on stretcher from ambulance.	125.00
19	Paint present dark room with black paint.	35.00
	T O T A L - - - - - - -	$170.00

If this hospital is closed, as recommended in Section 1, paragraph 2, the above repairs will not be needed.

[illegible]

Boiler Supplied on [illegible] Co.

Distributing for Impulse & Reaction of Steam Turbines.

* * * * * * * * * * * * * * * * * * * *

[illegible] mentioned [illegible] may be in the order of their [illegible] and should be ordered accordingly.

Catalog Number.	Item	Price Net.
[illegible]	Deflector [illegible] made from [illegible] steel.	[illegible]
[illegible]	Made [illegible] to diameter [illegible] first [illegible] Detailed [illegible] sets of diagrams for [illegible] of [illegible] on [illegible] from [illegible].	[illegible]
[illegible]	Plain [illegible] [illegible] with [illegible] water.	[illegible]

[illegible]

If this [illegible] is [illegible], [illegible] necessary to [illegible] [illegible] the above [illegible] will be [illegible].

APPENDIX D

Marine Hospital at Pittsburgh, Pa.

Administrative Equipment.
****

ADMINISTRATIVE equipment require.

Paragraph of report.	ITEMS	Estimated Cost.
20	Office (Out-Patient)	$162.00
2	Offices and Reception Room (Hospital)	85.00
22	Wards	603.00
18	Operating and surgical dressing room	428.00
20	Laboratory	25.35
19	X-Ray Room	35.00
5	Kitchen	389.00
12	Dining Room	108.25
8	Officers' Quarters	225.00
9	Attendants' quarters (female nurses)	207.00
15	Coal burning, water jacketed incinerator	200.00
	T O T A L - - - - - -	$2,467.00

If this hospital is closed, as recommended in Section I, paragraph 3, the above equipment would not be necessary.

APPENDIX I

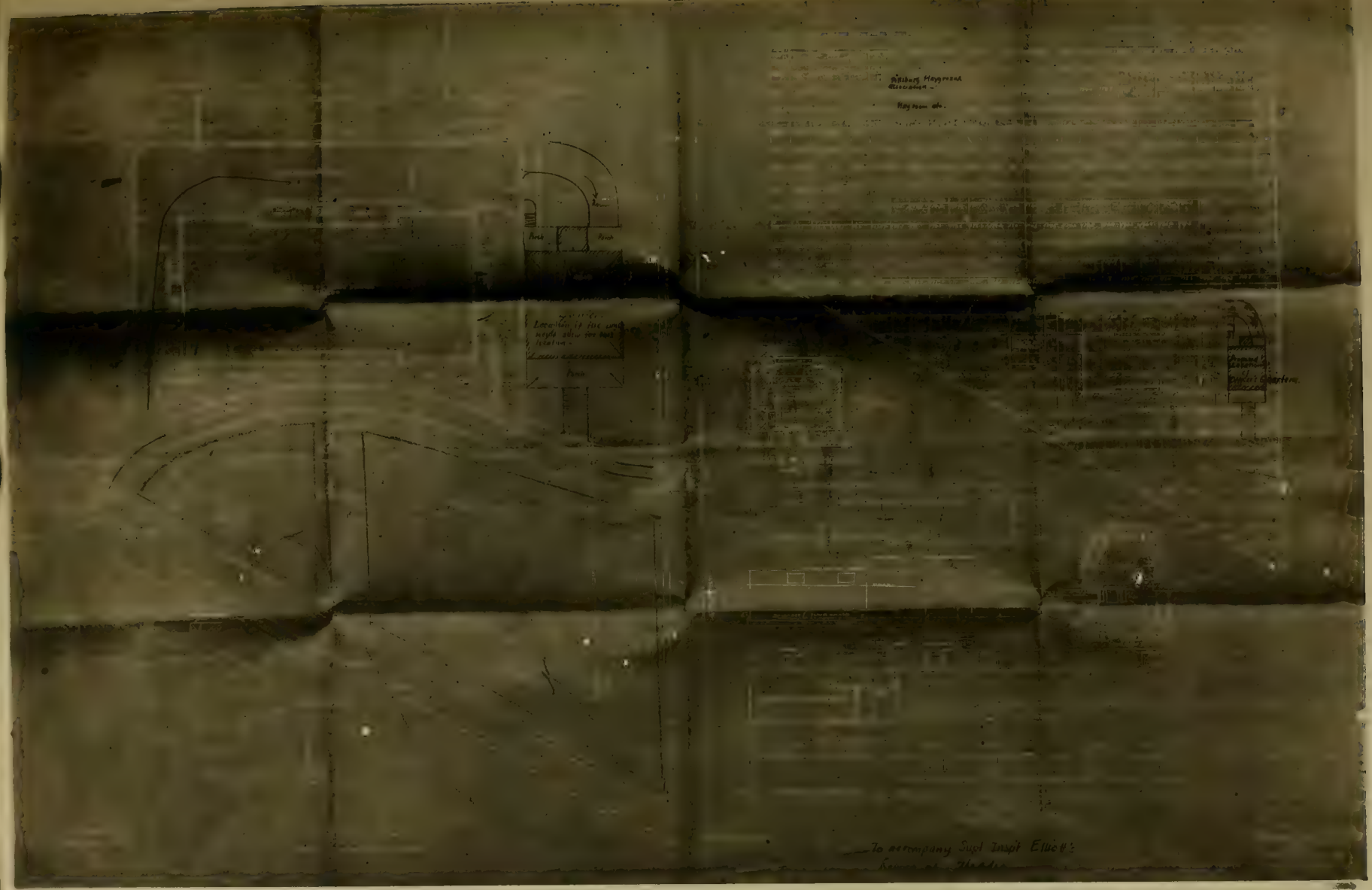
[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]
[illegible]	Office (Non-Personnel)	[illegible]
[illegible]	Office and Household Gas (Electrical)	[illegible]
[illegible]	Rent	673.00
[illegible]	Cleaning and [illegible] Equipment [illegible]	[illegible]
[illegible]	Laundry	[illegible]
[illegible]	Toilet Items	[illegible]
[illegible]	Kitchen	[illegible]
[illegible]	Dining Room	[illegible]
[illegible]	Office Supplies	200.00
[illegible]	Miscellaneous (Items [illegible])	300.00
[illegible]	Other Supplies [illegible] Equipment	[illegible]
	T O T A L - - - - - - -	32,484.00

If this amount is closer, the [illegible] in Service [illegible] [illegible] above [illegible] would not be [illegible].



approx 12000 s' for tents
estimated total capacity

VIEWS OF
U·S·MARINE·HOSPITAL·

[illegible] BURGH · PA ·

·HOSPITAL·&·GROUNDS·

·HOSPITAL·FRONT·VIEW·

·HOSPITAL·REAR·VIEW·

·HOSPITAL·WEST·END·

·HOSPITAL·&·OLD·ARSENAL·B'LD'G·

·ARSENAL·B'LD'G·&·GATE·TO·PARK·

·ARSENAL·B'LD'G·

·OLD·GATE·AT·CEMETERY·

JTC

December 30, 1915.

3rd Indorsement.

Respectfully returned to the Supervising Architect, Treasury Department, with the opinion that it is not now considered necessary to have the repairs, mentioned in Superintendent C. P. Sullivan's letter of November 22, 1915, (all items in appendix "A" of the Report of the Committee on the Physical and Administrative Equipment at the U. S. Marine Hospital, Pittsburgh, Pa.), made at that hospital.

(Signed) Rupert Blue.

Surgeon General.

Surgeon General.

JTC

September 22, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Pittsburgh, Pa., with the exception that I believe this hospital should not be closed as it is needed for special public health work which is now being undertaken at that place.

Respectfully,

(Signed) Rupert Blue.
Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

PORTLAND, MAINE.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

H. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.B.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

U.S. MARINE HOSPITAL, PORTLAND, MAINE.

Report of inspection made October, 1914, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The hospital site is favorably and advantageously located on Veranda Point, in East Deering, three miles from the business center of Portland.

The grounds, containing 16 acres, 140 rods, are spacious and the buildings are advantageously placed on an elevation overlooking the surrounding country and water; the hospital and grounds present a pleasing and commanding appearance and are conveniently situated with reference to the city and harbor.

(2) History.

The first record of the care of sick and disabled seamen at Portland, Maine, goes back to the year 1805. The Collector of Customs acted as agent for the marine patients and employed a local physician to give them medical and surgical attention. There was no hospital available for their reception so the patients were "boarded out" or the marine physicians visited them at their homes the same as private cases. The earliest register of patients shows 30 admissions to treatment in 1806 and in 1822 there were 76. On May 9, 1824, an agreement was made with the town of Portland to care for seamen in the almshouse. This plan continued until 1832 when the sentiment against this form of relief for seamen was so strong that an effort to secure from the Government a marine hospital for Portland was inaugurated. A bill appropriating funds for the erection of a marine hospital was reported in Congress in January, 1836, but failed to pass.

The contract with the City of Portland was terminated about 1840 and the care of the patients was awarded to Osgood Noyes, a "Cordwainer" who was called "Keeper of the Marine Hospital".

The building in which the seamen were cared for was a two-story wooden structure at the head of Hancock St. and was a sort of sailors' boarding house. It was destroyed by fire in 1866. On July 1, 1849, a contract for the care of sick and disabled seamen was made with George H. Wilson who kept a sailors' boarding house at 130 Fore St. This continued until 1858 or 1859 when the seamen were moved to 23 Oxford St.

In 1853, Congress made the first appropriation of $11,000.00 for purchase of a site and a commission was appointed which selected the site on which the hospital now stands, on the peninsula in Casco Bay, called "Veranda Point" in the village of East Deering. This property, consist-

ing of about 20 acres, was purchased on May 30, 1855, at a cost of $11,000.00

The construction of the hospital was begun in the same year and was completed on August 1, 1856, but was not occupied on account of faulty construction of the roof. Subsequent appropriations were made in 1857 and 1858 and on July 1, 1859, the patients cared for under contract in the city were removed to the new hospital and it was opened for the reception of patients.

The total cost of the building and grounds up to the date of opening was $95,758.73.

(3) Need for a Marine Hospital.

Hospital facilities for seamen will always be needed in this vicinity. No satisfactory arrangements can be made for the care of patients in other hospitals in Portland and a hospital under the control of the Public Health Service should continue to be maintained in this locality.

(4) Adequacy of Plant.

The capacity of the present hospital is ample so far as can be foreseen for some time to come. Certain changes and improvements are, however, imperative, to provide the facilities and equipment demanded by modern practice and secure a plant adequate for the present bed capacity. This can be accomplished without interfering with the present assignment of space for quarters and is described in detail under Section III.

(5) Acquisition or Disposal of Land.

The reservation is ample in extent for all present and prospective needs but no part of it could be advantageously disposed of.

(6) Future Development and Disposal of Plant.

The present plant should be retained. The existing hospital building lends itself to expansion to an extent which it is believed will be adequate for all future needs of a station at this point, with only minor alterations to the building, when the entire building is devoted exclusively to hospital purposes and the officer in command, the Pharmacist and all attendants are quartered in buildings to be erected for these purposes conveniently near the main building. Owing to the somewhat unusual amount of floor space in the building devoted to living quarters, it is thought advisable in this instance to show how this can best be arranged, and for that reason floor plans, showing the present arrangement of rooms and also the recommended changes and assignment of space, is attached hereto for consideration at the proper time. The arrangement is the result of careful study and serious consideration and it is believed would supply all the needs of a hospital of its capacity in the most economical way, both as to administrative and modern hospital requirements.

The provisions made therein are briefly as follows:

The first floor would be devoted entirely to administration, examination and subsistence uses, consisting of space for Surgeon's office,

Pharmacist's office, Visitors' waiting room, Patients' waiting and examination rooms, X-Ray room, Dispensary, Laboratory, Kitchen, Attendants' dining room and quarters for Interns, with dining room attached.

The second floor would contain, beside the rearranged operating suite, patients' dining room, detention room, quiet room, smoking room, toilet rooms for patients and attendants and six ward rooms.

The third floor would contain office for nurse on duty, quiet room, officers' ward and toilet, toilet for syphilitic patients, toilet for patients and eight ward rooms.

A residence should be erected for the surgeon, one for the Pharmacist and quarters for all attendants, which should include recreation rooms, toilet, etc., conveniently near the building.

These changes would increase the normal bed capacity from 38 to 62 and the maximum from 46 to 74 beds and would meet all probable contingencies of possible growth. Further extension would have to be provided for by the erection of additional hospital buildings for which there is ample space on the reservation.

II.
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings (for details see appendix A)
Total estimated cost of work recommended, $8315.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended, $4240.00

(3) Legislative Appropriation for New Construction (for details see appendix C)
Total estimated cost of work recommended, $15000.00

(4) Appropriations for Administrative Equipment (for details see appendix D)
Total estimated cost of items recommended, $5208.00

T O T A L ---------- $32763.00

(5) Personnel.

Adequate.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1:- Main Hospital. Three story, basement and attic, brick with stone trimmings, painted, fireproof except roof, verandas on

T O T A L ---------- [illegible].00

three sides, three stories. Plaster walls and ceilings painted. Pine trim painted, 3¼ D & M floors, except toilets which are terrazzo and marble, operating room which is porcelain tile, and basement floors which are cement. Attic is unfinished except for 6" D& M pine floor. Tin roof, steam heat, electric lights. Floor area, 20,909 square feet.

Building No. 2:- Barn. Wood frame one story and two lofts, on brick piers, clapboard exterior, shingle roof, cement floor except in attendants quarters which has D & M floors, with D & M walls and ceilings, varnished. Balance of building has no interior finish. Stove heat in attendants' quarters only. Electric lights throughout. Floor area, 2,701 square feet.

Building No. 3:- Isolation Hospital. One story wood frame on brick piers, clapboard exterior, shingle roof, plaster walls and ceilings painted, wood trim painted, 3¼ D & M pine floors painted. Local hot water heating plant. Electric lights. Floor area, 1,288 square feet.

Building No. 4:- Coal storage for No. 3. Wood framed one story, clapboard exterior, shed roof shingled. No interior finish or paint, plank floor, no heat, no light. Floor area, 46 square feet.

Building No. 5:- Power and Sterilizer House. One story wood frame on stone foundation, clapboard exterior, shingled monitor roof, D & M side walls and ceiling in two rooms only; balance has no interior finish. Brick floor in boiler and coal room, balance 3¼ D & M pine. Electric light, boiler heat. Floor area, 1,779 square feet.

Building No. 6:- Ice House. One story wood frame on stone foundation, clapboard exterior, shingle roof, no interior trim, except ceiled with 12" wide boards, studding space packed with sawdust, no heat, no light. Floor area, 225 square feet.

(2) Offices.

There are two offices, one for the surgeon and one for the pharmacist, located on the north side of the first floor. They are well furnished and suitable for the needs of the station. Additional furniture is needed for these rooms, as indicated in administrative equipment section of this report.

(3) Visitors' Reception Room.

There is no room for this purpose. Visitors wait in Pharmacist's office. Such a room is not needed under present conditions.

(4) Examining Room.

There is no special room provided at present. Such a room is desirable and there is available space which can advantageously be devoted to this purpose on the third floor next to room now assigned for X-Ray room.

(5) Kitchen and Diet Kitchens.

The kitchen is on the first floor, is large enough for present needs and is fairly equipped. A new dumb waiter, running from this room to the patients' dining room on the second floor is needed, as the present one is worked by hand, is slow and cumbersome in action and usually requires the force of two men to move it. Additional utensils needed are indicated hereinafter.

The fuel used in the kitchen range is illuminating gas, cost $1.00 per 1,000 feet.

A large ice box is located in the kitchen. There are no steam tables or steam cookers and none are needed.

(6) Pantry and Food Storage.

The present kitchen serves the purpose and is adequate. Food is delivered daily and the need for storage space is small.

(7) Storerooms.

Storerooms are provided in the basement for medical and hospital supplies and unserviceable property. There is adequate space available for this purpose for all time.

There are two rooms in the basement, one on the north and one on the south side of the building which have never been finished, which, if needed, would add additional space for storage purposes.

(8) Quarters for Officers.

The Surgeon's quarters occupy the entire first and second floors of the west wing, one room on the third floor for the servant and one in the basement for a laundry.

They are well furnished but additional furniture is needed.

The Interns's quarters consist of one room and bath on the third floor, west wing.

The quarters for Pharmacist are on the south side of the first floor, consists of five rooms and a bath and toilet, and are fairly furnished; a small amount of additional furniture is needed.

(9) Quarters for Attendants.

Their quarters are located on the third floor and consist of five rooms, two rooms on the east and three on the west side. They are fairly comfortable but need some additional furniture.

Eight attendants are quartered in these rooms and there is ample space for three more. One large room has at present only one occupant and could easily accommodate four. Two attendants, the stableman and yardman

have quarters in a large room in the stable.

Two married attendants do not live on the reservation.

(10) Patients' Dining Room.

The patients' dining room is located on the second floor adjoining the present dispensary; is sufficient for convalescent patients. New tableware, cutlery and table linen are required to replace the present supply, which should be condemned.

(11) Interne's and Officers' dining room.

At present the Interne takes his meals in the attendants' dining room. This is objectionable and a separate room should be provided which could also accommodate officers.

This can be accomplished by moving the attendants lodged in room on the third floor in the rear of the X-Ray room, dividing that room by a partition and using one-half for this purpose and the other half for an examining room for eye, ear and throat cases.

(12) Attendants' Dining Room.

Attendants' dining room adjoins the kitchen and is adequate. The equipment is fair.

(13) Recreation Room.

A recreation and smoking room is provided on the second floor and is satisfactory for the purpose.

(14) Disinfecting Facilities.

A Kinyoun-Francis steam disinfector is located in a room in the power house. The soiled end is located in a room used as a carpenter shop and is separated from the clean end, which is in a room used as a paint shop, by a thin board partition. The entire arrangement is very unsatisfactory and unsafe both as a fire risk and sanitary hazard. These rooms should be used exclusively for disinfecting purposes.

(15) Incinerators.

A garbage incinerator of two barrel capacity should be installed and located temporarily in one of the boiler rooms in the main building, to be later removed to permanent location in present boilerroom when heating plant is removed from present building.

(16) Disposal of Soiled Linen.

More sanitary methods should be adopted to convey dirty linen from the wards and other rooms. At present it is placed in hampers located on

the verandas or in the corridors, and from there carried to the laundry. Sanitary bags should be provided for the purpose, and bags and contents sterilized before taken to the laundry.

(17) Laundry Facilities.

The present Laundry is located in the basement of the main building and contains two washers, one mangle, one shirt and collar machine and one centrifugal dryer. This machinery is somewhat inadequate for present needs, is old and requires almost constant repairs. The location in the building is not convenient, is poorly lighted and has no adequate drying rooms.

When a new heating plant is established, the space vacated should be converted into a laundry and all serviceable machinery moved there, to be supplemented by a new steam dry room, 84" mangle, collar and shirt machine and a new centrifugal dryer, all machinery to be operated from motor power to line shafting. The present engine is badly worn and not worth repairing.

(18) Operating and Surgical Dressing Room Facilities.

The surgical operating room is located on the second floor. It has a good vitreous tile floor and wainscot, is well lighted, but is badly arranged when compared with modern methods. The lavatory and dressing sterilizer are in this room. Anesthetics are also given here and it is used as a dressing room for all cases. There is no instrument sterilizer and at the present time the instruments are boiled on the kitchen range, preparatory to operation. It also contains an old metal table, plain in type, of light construction, without castors, without any means for raising or lowering a patient, and should be replaced by a modern surgical operating table. Some additional surgical instruments are needed.

A change in the above arrangement of the operating room is imperative and this could be accomplished by removing the dispensary, which is located across the corridor, to the third floor of the building and placing it in the room now set apart for an X-Ray apparatus which has not yet been furnished. The present dispensary could then be divided by a partition so as to convert it into surgeon's wash room and dressing room. The corridor between the two rooms, which is of sufficient size, could then be utilized as an etherizing and sterilizing room, by placing therein the dressing sterilizer now in the operating room and adding an instrument sterilizer and a table for the administration of anesthetics. The table now in the operating room could be used in the new dressing room. A new sink with pedal or elbow attachments would be needed for the surgeon's wash and dressing room.

This rearrangement of these rooms would make a practical working surgical unit, well cut off from the hospital proper, and sufficient for all needs.

The new dressing, sterilizing and surgeon's wash rooms should have vitreous tile floors with base, plastered walls and be enamel painted.

All the above is shown on a drawing of second floor plan, forming part of this report.

The furniture required for the dressing rooms would be a ward carriage, instrument case and case for holding dressings.

(19) X-Ray Facilities.

An expensive X-Ray outfit is not needed at the present time and the ordinary work about the hospital of this character could be done by a portable X-Ray apparatus, such as that manufactured by the Western X-Ray Coil Co., of Chicago, at a cost of $300.00. This apparatus, besides the X-Ray current has a cautery, a small electric light fixture, a high frequency and D'Arsonval current. This apparatus could be kept in the dispensary when it is located on the third floor, and carried to the wards, operating and dressing rooms when desired. There is a small closet adjoining this room on the third floor which, by a slight alteration, could be used as a dark room for developing purposes.

(20) Laboratory.

A small room on the third floor adjoining the toilet room on this floor has been set apart for laboratory work. It is large enough, well lighted and contains a microscope, dark field illuminator, incubator, sterilizer and centrifuge and is sufficient for present needs.

(21) Dispensary.

The dispensary is at present located in a room opposite the operating room. This room is needed as a part of the operating room suite and the dispensary should be moved to the third floor directly over its present location.

The present dispensary has a fair outfit but requires a water distilling apparatus, suppository machine and an infusion jar.

(22) Wards for Seamen.

Second Floor:- There are three wards on this floor, two of 3 and 4 bed capacity used for surgical purposes and one larger ward of 12 beds, used for medical cases. These and the two larger wards on the third floor require new beds to replace old ones, and one invalid bed, bedside chair, clothes and linen lockers, racks for bedpans, rolling chairs, automatic bedpan sterilizer, portable bath with rack for typhoid cases, nurses desk and chest locker and one portable light.

The entrance to the toilet room adjoining the small smoking room on this floor should be carried to the ceiling, so as to cut it off from the main hall in order to prevent disagreeable odors from reaching the corridor.

Third Floor:- There are two twelve bed wards on the third floor, one on the north and one on the south side of the building, and the one on the south side has been set apart for the use of tubercular patients. A wide veranda, running the full length of the ward, adjoins it and, with slight alterations, could be used for the out-of-door treatment of such cases.

23. Quiet Wards.

There are no rooms specifically assigned for this purpose. There are two small wards which, if required, could be utilized. Facilities are adequate for present needs.

24. Wards for Revenue Cutter Officers.

One room with accommodations for one officer is located next to Interne's room on third floor. It is comfortably furnished and sufficient for present needs.

The Interne's toilet is available for this room.

25. Toilet Facilities.

Toilets are provided for patients on both ward floors. Certain fixtures in the third floor toilet are reserved for attendants. Two wash basins for the use of attendants are placed in the corridor leading to third floor toilet. They should be removed and placed within the toilet room proper, where there is ample space for their reception.

A separate toilet is desirable for venereal diseases and this can readily be provided by utilizing a small toilet in west end of west wing.

(26) Portable Tubs.

One portable enamelled bath tub with rack for the immersion of typhoid cases is required to replace an old zinc lined tub without rack, and now in use for such cases.

(27) Padded Cells.

No special room for the care of violent alcoholic or insane cases. There is a Humane Restraint Apparatus on hand and such cases can be sent to one of the city or state institutions or to the Government Hospital for the Insane, at Washington, D. C, when necessary.

(28) Necropsy Facilities.

There is one room for this purpose in the isolation building. Its equipment is adequate for the needs of the station. A new building for necropsy and unserviceable property should be constructed.

(29) Isolation Facilities.

All isolation facilities are provided in a one story frame build-

ing, 25½" x 50½', with brick foundation, located at the northern end of the reservation, some distance from the other structures. It has one general ward, a toilet and bathroom, a kitchen (in which is located a hot water heating plant for the building) and a necropsy room.

It is sufficient for the needs of the station but could be made more useful by dividing the large ward into several smaller compartments.

The necropsy facilities and heating plant should be removed from this building when the central heating plant and the necropsy building recommended are provided.

(30) Out-Patient Office.

An office is maintained in the Custom House with an acting assistant surgeon in charge. Number of out-patients treated in 1914, 538; 1909, 434. A revolving chair and desk are needed.

(31) Floor Space.

The total net floor space, including halls of the main building, is as follows:-

Basements,--------	4,760	square	feet
First floors,-----	5,383	"	"
Second " -----	5,383	"	"
Third " -----	5,383	"	"
T o t a l	20,909	"	"

Total net floor space for hospital uses is	38.5%
" " " " " living quarters is	37.0%
" " " " " halls is	24.5%
	100.0%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital proper is 37 beds for seamen in five wards, and one bed for officers of the Revenue Cutter Service. In an emergency, 45 seamen can be accommodated but the wards would be overcrowded and air and floor space would be deficient.

On a normal basis, each patient has from 72 to 102 square feet of floor area and 940 to 1325 cubic feet of air space.

The smaller quantities apply to 30 out of the 37 patients.

Eight patients can be accommodated in the Isolation Building.

(33) Relief Afforded and Cost.

The relief work of the station has diminished this year and the reason given is the falling off in shipping entering Portland Harbor on account of the war in Europe. On October 13, 1914, there were 14 patients

in the hospital and four of these were chronics. The maximum daily number of patients in 1914 was 35. The number of admissions to date, from July 1, 1914, to October 13, 1914, was 61.

The total number of sick days for 1914 was 7,003 or a daily average of 19 plus. The total cost per day per patient was $3.32. In 1909, the total number of sick days was 8,465 or an average of 23 plus, daily. Total admissions for 1914 were 243, for 1909 were 270.

(34) Ambulance Service.

Station possesses an ambulance which is too heavy for the one horse now available. Service is also secured on contract for $3.00 per trip from the city. The need for ambulance service is small (two or three trips per month) and no increase in ambulance facilities is recommended as the service can be satisfactorily and economically performed by contract.

(35) Heating, Power Plant and Ventilation.

There is a heating and power plant located in Building No. 5 which is supplemented by two very old heating boilers in Building No. 1, which are used to supply low pressure steam to direct steam radiation in Building No. 1. There is one return tubular boiler, 44" x 12'-0", in Building No. 5 which supplies steam to two lighting plant engines, one laundry engine, steam sterilizer and supplements heating boilers in Building No. 1 with live steam through a reducing valve.

Power plant consists of one 10 HP B. F. Sturtevant slide valve engine direct connected to generator, one Westinghouse steam engine direct connected to generator and one Worthington Duplex boiler feed pump, 4½ x 2¾ x 4.

The present lighting plant should be eliminated and a new central heating plant built and all buildings requiring heat supplied therefrom and the present building remodelled into a Laundry, disinfecting and carpentry and paint shops, as mentioned under appropriate headings of this report.

There is local ventilation in several rooms of Building No. 1 only through registers to flues in the building which can and should be extended to all rooms when heating plant is removed from the basement, as there are chimneys from closed fireplaces and smoke flues from all rooms of the building. The Isolation Hospital has ventilation through windows and doors only, which is satisfactory at this station.

(36) Illumination.

The grounds and buildings requiring lights are lighted by 110 volts direct current service from the power plant on the reservation which consists of one 10 KW generator for night service and an auxilliary 2 KW generator. The service rendered is satisfactory but could be purchased from the city at a less cost than the present cost of production and a contract to that end is recommended.

The arrangement and type of fixtures, while not modern, are well

placed and adequate for all needs except that all fixtures should be supplied with shades.

There is also an auxilliary gas illuminating service in case of interruption of electric lights.

(37) Decoration.

The walls throughout the building have all been painted and are in a fair state of repair. The colors for various wards, rooms, etc., appear to have been selected without regard to adaptability or effect on patients or reference to other portions of the building, with the result that the sick rooms, rest rooms, etc., are neither restful, light reflecting or cheerful.

(38) Telephone and Call Systems.

The hospital has one telephone in Pharmacist's office, direct, connected on two-party line (Hospital and Outpatient Office) to Portland exchange, Bell System.

There is an intercommunicating telephone system of 13 stations, 8 installed, reaching various parts of the main building and in excellent condition. There are also four magneto phones on one line connecting main building with stable, power house and isolation building. In good condition. There is no bedside call system. Such a system should be installed.

(39) Ice and Refrigeration Facilities.

A wood frame ice house, adequate and convenient, is located east of the main building, which also contains storage room for yard tools, such as rakes, hoes, etc., but should be replaced by an electric driven refrigerating plant, to be located in basement of Building No. 1.

An ice water service should be installed with bubble drinking founts on each floor of Building No. 1.

(40) Water Supply and Fire Protection.

Water is obtained from city main in Veranda Street, through 4 inch connection to main building with two inch branch to power house and isolation building. Stable has a 1½ inch connection direct to city main. The source of the supply is Sebago Lake. The quality of the water is excellent and the quantity is ample. The pressure is 55 pounds. There is one fire hydrant 25 feet from main building, at the northwest corner. It has a 3 inch hose connection and is old type. There is one 1½ inch hose plug at stable and at isolation building. In the main building there are four hose racks, one on each floor, each equipped with 50 feet of 2 inch hose and nozzle.

In the ice house, there is a wheel hose reel with 200 feet of 2 inch rubber lined fire hose. There is a 50 foot coil of 1½ inch hose at the

stable and at the isolation building.

There are three chemical extinguishers, three gallon Underwriter type, in main building but none in power house, stable or isolation building. The nearest city hydrant is ¼ mile from hospital.

The present hydrant at the front of main building should be replaced by a new two-way fire hydrant with a third connection for suction of city fire engine. Hydrant should be placed not nearer to the building than 40 feet. One of the hose connections should be 2½ inches with thread to fit city fire hose and the other 2 inches to fit station hose. Four inch city main should be extended around building and another hydrant installed off southeast corner. A third hydrant should be installed at stable with separate four-inch connection to city main.

A new wheel hose reel with 400 feet of 2 inch fire hose should be supplied and kept at the ice house. The reel now there with 200 feet of hose should be transferred to stable. Six additional 3-gallon chemical extinguishers should be supplied, three for the main building and one each for stable, power house and isolation building.

(41) Fire Alarm System.

Station has a large bell in rear of main building which is struck by hand. Drills are held weekly. Nearest city fire alarm box is ¼ mile away. City fire alarm box should be installed on reservation. Otherwise facilities are adequate.

(42) Sewers and other Drainage.

All sewerage, except that from stable, is discharged overboard near wharf by combined system. Stable discharges into cesspool in rear. Present arrangements adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

Semi-macadam roads lead from main gate to stable and to main hospital building. These roads need resurfacing with Tarvia or other similar treatment.

There is no satisfactory way of reaching the Isolation Building by team.

The northeast entrance from the street should be graded down to meet the new street grade to permit entrance to the grounds at this point. It is probable that a part of this work should be done by the city, as the Government granted right of way through its property for the construction of Veranda Street. This should be taken up directly with the City of Portland.

Cement sidewalks lead from main gate to main building and are adequate. An additional cement walk and steps should be constructed from main building to Isolation Building.

An iron picket fence separates the southern part of the reservation

from Veranda Street. It needs scaling painting.

The northeast end of the reservation on which the main building stands has been used as a dumping ground for ashes and other refuse to such an extent as to seriously mar the otherwise pleasing appearance of this part of the reservation and will ultimately kill the old and beautiful trees in this vicinity. This practice should be stopped and provision made for removing ashes and other refuse from the reservation.

In general the grounds present a pleasing and well kept appearance.

(44) Wharves, Sea Walls, Etc.

There is one small wooden landing wharf, 34'-6" long by 6'-0" wide, which is used for a small boat of one of the attendants. Bottom is exposed at low water. Wharf is unsuitable for landing patients and such facilities are not required. If brought by water, they can be landed at wharf at Veranda St. bridge. Practically all patients come by ambulance from city.

(45) Livestock, Vehicles, Etc.

The station possesses one horse and an equipment of vehicles, tools, etc. These are adequate and in general in good condition. The ambulance is too heavy for one horse but it is not needed, suitable service being obtained under contract.

(46) Personnel.

There is one officer in charge, one Pharmacist, one Interne, (one acting assistant surgeon on duty at the city office of the Service at the Custom House) and twelve attendants.

(47) Records.

The records and books are properly kept with the exception of the clinical records of patients admitted. These are very incomplete and of little value for clinical purposes.

(48) Books.

The medical books in the station are old and out of date.

(49) Purchase of Supplies.

Subsistence, fuel and water are purchased under yearly accepted proposals and contract and the system is satisfactory.

Advantage of fluctuations in prices for subsistence could be obtained by purchase in open market.

APPENDIX A

Marine Hospital at Portland, Maine.

Appropriation for Repairs & Preservation of Public Buildings.
****

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.	
5	Preparing dumb-waiter shaft for receiving electric hoist.	$60.00	✓
11	Partition in present X-Ray room for Internes and sick officers' dining room on 3rd floor (lath and plaster).	75.00	later
	Partition in second story room for surgical dressing and wash up room (lath and plaster).	40.00	✓
	Partition across end of hall, second story, for sterilizing room (lighted partition)	60.00	✓
25	Make door to small toilet room, third floor, rear, to swing out and all additional plumbing fixtures.	5.00	✓
29	Place 7'-0" partitions in Isolation Building for breaking contacts in contagious ward.	75.00	later
39	Preparing space in basement of Building No. 1 for refrigerating and ice water system.	150.00	not now
17	Remodelling laundry building	3,000.00	"
38	Bedside call system.	400.00	"
40	Three new hydrants, new 4" mains, 400 feet of 2" fire hose, one hose reel and 6 chemical extinguishers.	1,000.00	✓
41	City fire alarm box.	200.00	✓
43	Painting fence, cement sidewalk to isolation building, resurfacing roads and grading northeast entrance.	2,800.00	✓
	cyl. & m.V.P.	600	✓
	Painting all ~~iron~~ work Building No. 1.	450.00	✓
	T O T A L - - - - - - -	$8,315.00	

APPENDIX A.

Matron Hospital at Portland, Maine.

Estimates for Repairs & Improvements at Public Buildings.

Matron Hospital Department are in the order of about estimates of items and costs in materials Quantity.

Number of report.	Items	Estimated Cost.
1	Supplying instrument-making shop for Hospital electric motor.	[illegible]
11	Partitions on ground floor for laboratory and rest rooms; light from on the floor (lath and plaster).	[illegible]
	Partition in second story room for examining [illegible] and eyes by room (lath and plaster).	[illegible]
	Partition across end of hall, second story, for dressing room (lighted partition)	60.00
	Door door to small lavatory room, entry floor, room, in entry hall and all necessary plumbing fixtures.	[illegible]
	Glass floor partitions in Industrial Building for receiving patients in reception room.	[illegible]
	Necessary repairs to basement or building No. 1 for reconstruction and new drain system.	[illegible]
	Remodelling laundry building	[illegible]
	Steam coal system.	[illegible]
	Clean new Estimate, now 27 reading, will find it in file book, was lost and had to change [illegible]	[illegible]
	Fire [illegible] Bldg.	[illegible]
	Building fence, nearly dilapidated in laboratory building, remodelling roofs and grading surrounds.	8,000.00
	Heating [illegible] Building No. 1.	[illegible]
	TOTAL - - - - - - -	88,323.00

APPENDIX B

Marine Hospital at Portland, Maine.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
25	Changing two hall lavatories from hall to present adjoining toilet room.	$75.00 ✓
5	Electric dumb-waiter in present hand hoist shaft.	350.00 ✓
17	One 10 HP electric motor for laundry.	180.00 later
18	New surgeon's wash up sink in surgeon's wash up room on second floor.	60.00 ✓
25	Place lavatory and tub in small room on third floor rear.	75.00 later
39	Refrigerating system and ice water founts.	3,500.00 "
	T O T A L - - - - - - - -	$4,240.00

APPENDIX C

Marine Hospital at Portland, Maine.

New Construction.
****

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
28	New building for necropsy and unserviceable property.	$3,000.00
35	New heating plant	12,000.00
	T O T A L - - - - - - - - -	$15,000.00

APPENDIX D

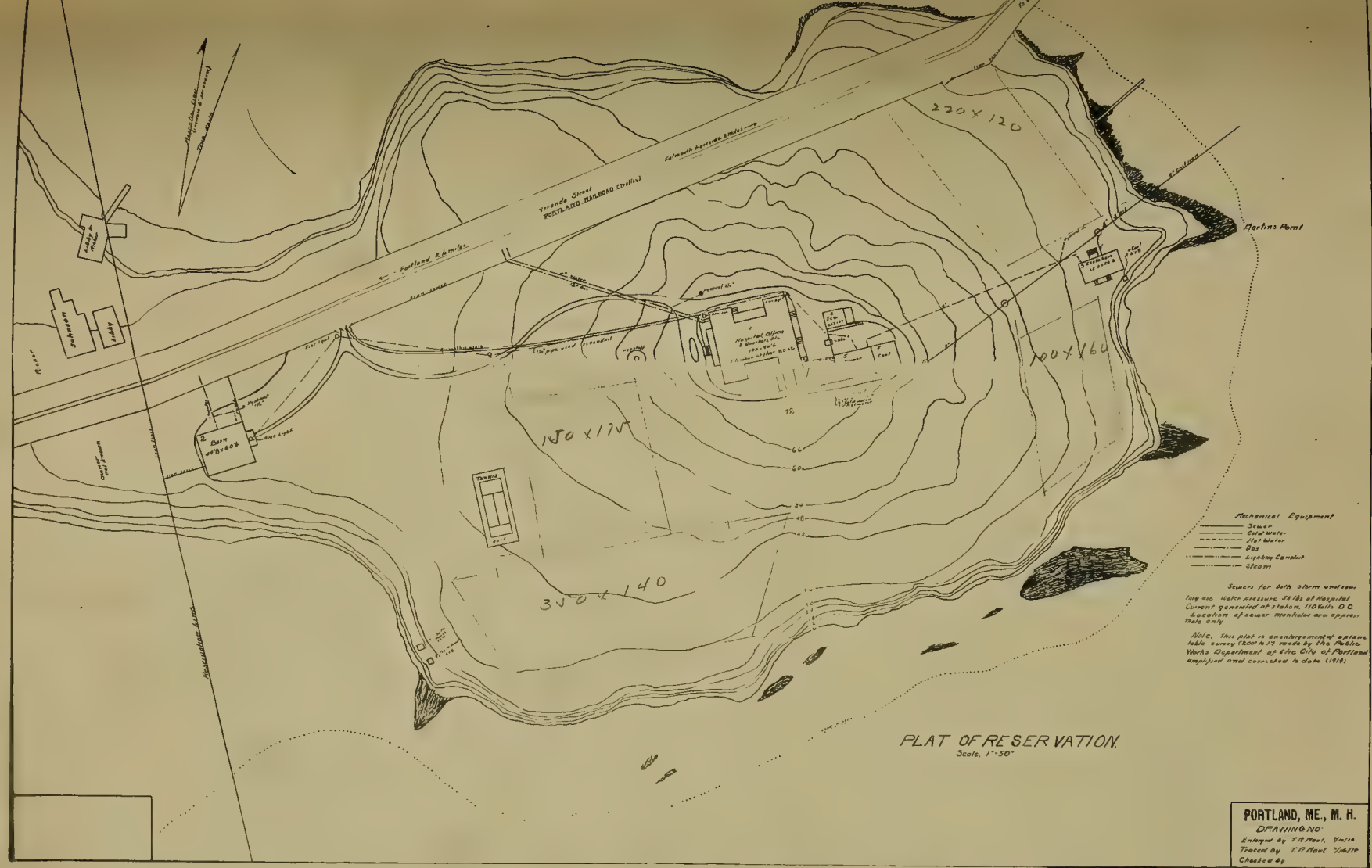
Marine Hospital at Portland, Maine.

Administrative Equipment.
* * * * * * * * *

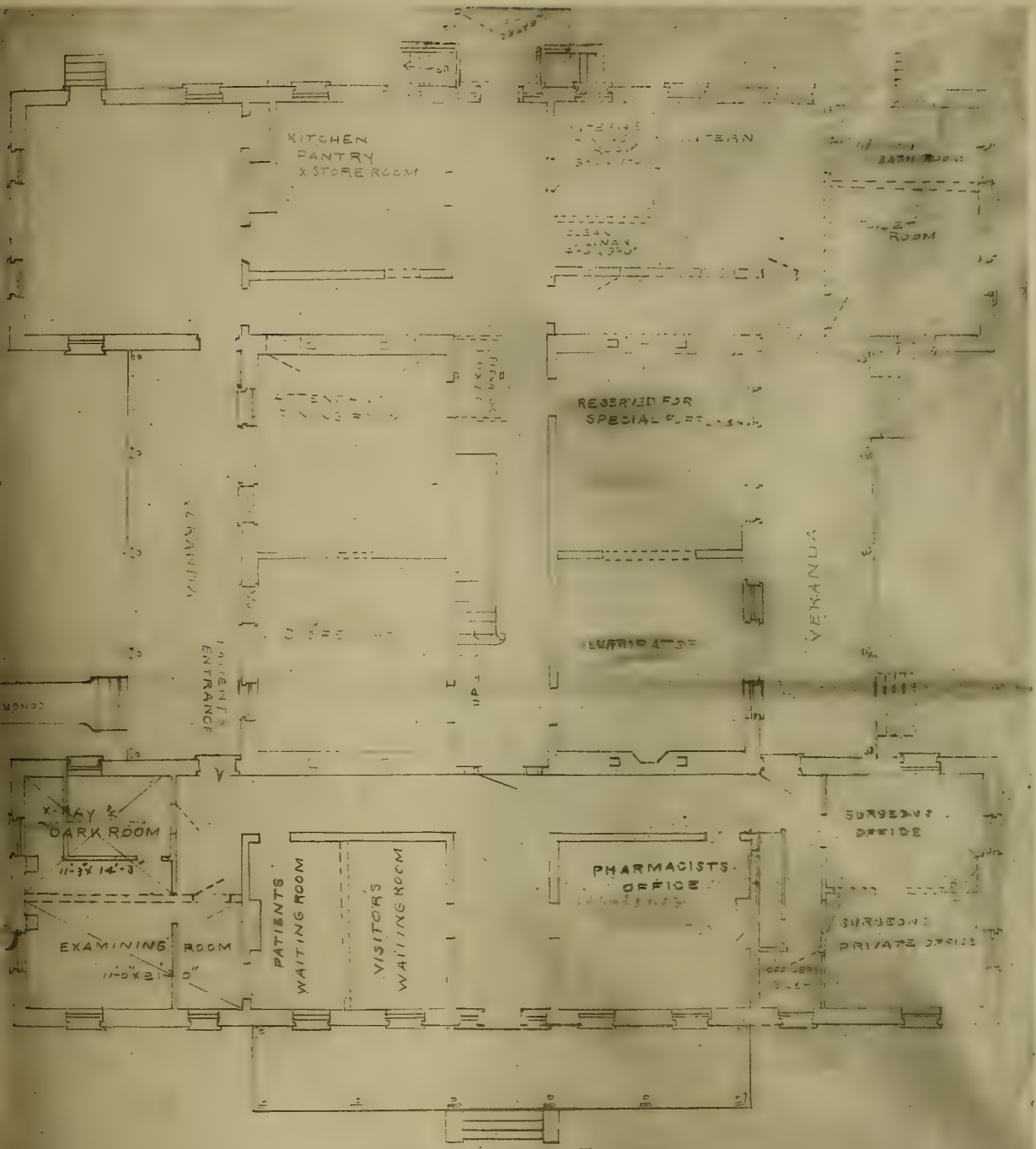
ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	Estimated Cost.
2	Office (Out-patient's)	$115.00
3	Office (Hospital)	65.50
22	Wards	1,120.00
18	Operating Room	450.00
21	Dispensary	42.00
18	Dressing Room	400.00
19	X-Ray Room	300.00
5	Kitchen	115.00
10	Dining Room	136.00
17	Laundry	1,055.00
8	Officer's quarters	650.00
9	Attendants' quarters	350.00
36	Shades for lighting fixtures	110.00
15	Incinerator	300.00
	T O T A L - - - - - - -	$5,208.50

T O T A L - - - - - -

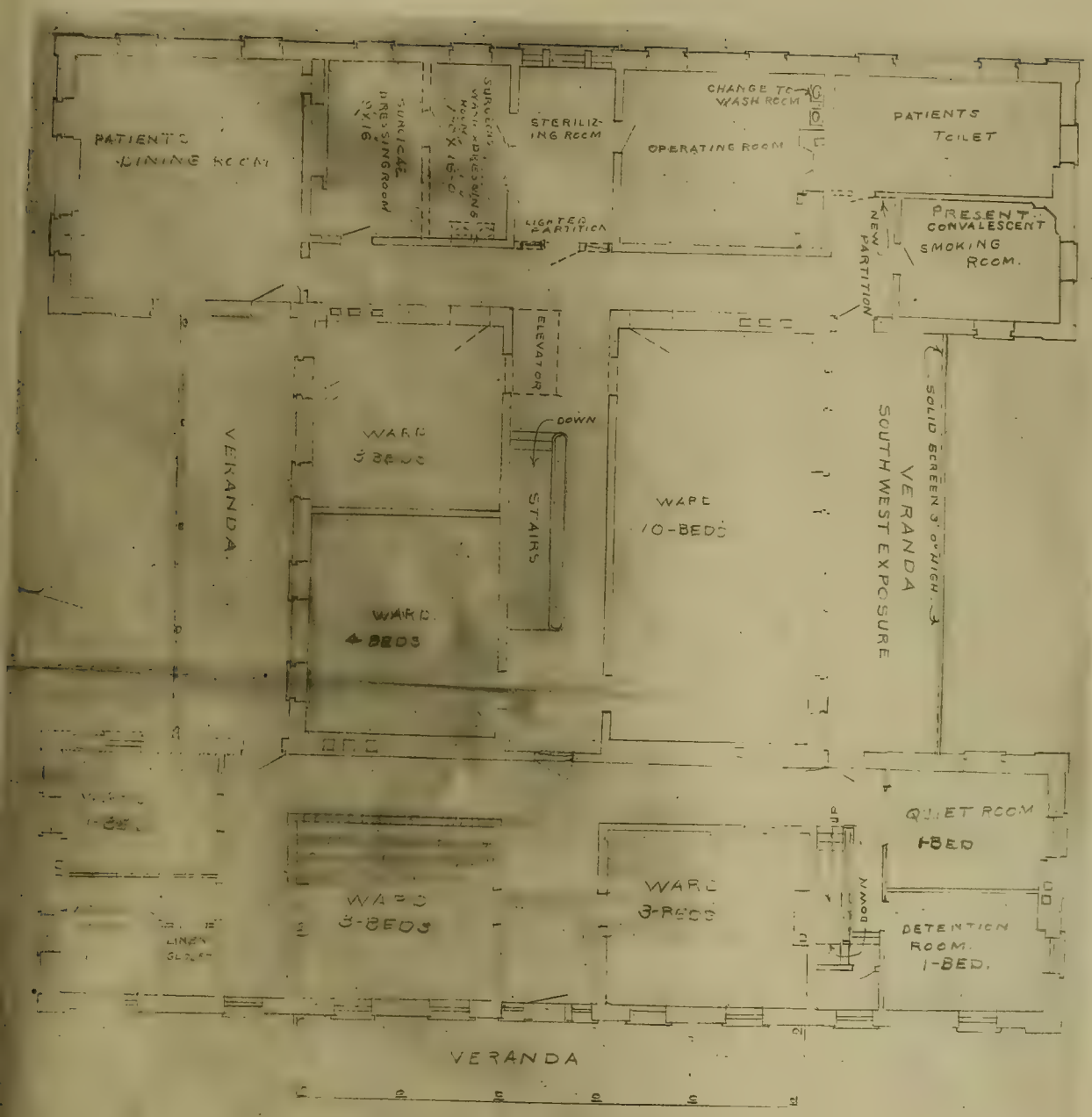


Estimated tent capacity
239.



FIRST FLOOR PLAN -
REVISION TO ULTIMATE CAPACITY
FULL LINES INDICATE PRESENT &
DOTTED LINES INDICATE ULTIMATE
ARRANGEMENT.

S. MARINE HOSPITAL
PORTLAND, ME
[illegible]neous Drawing No 630

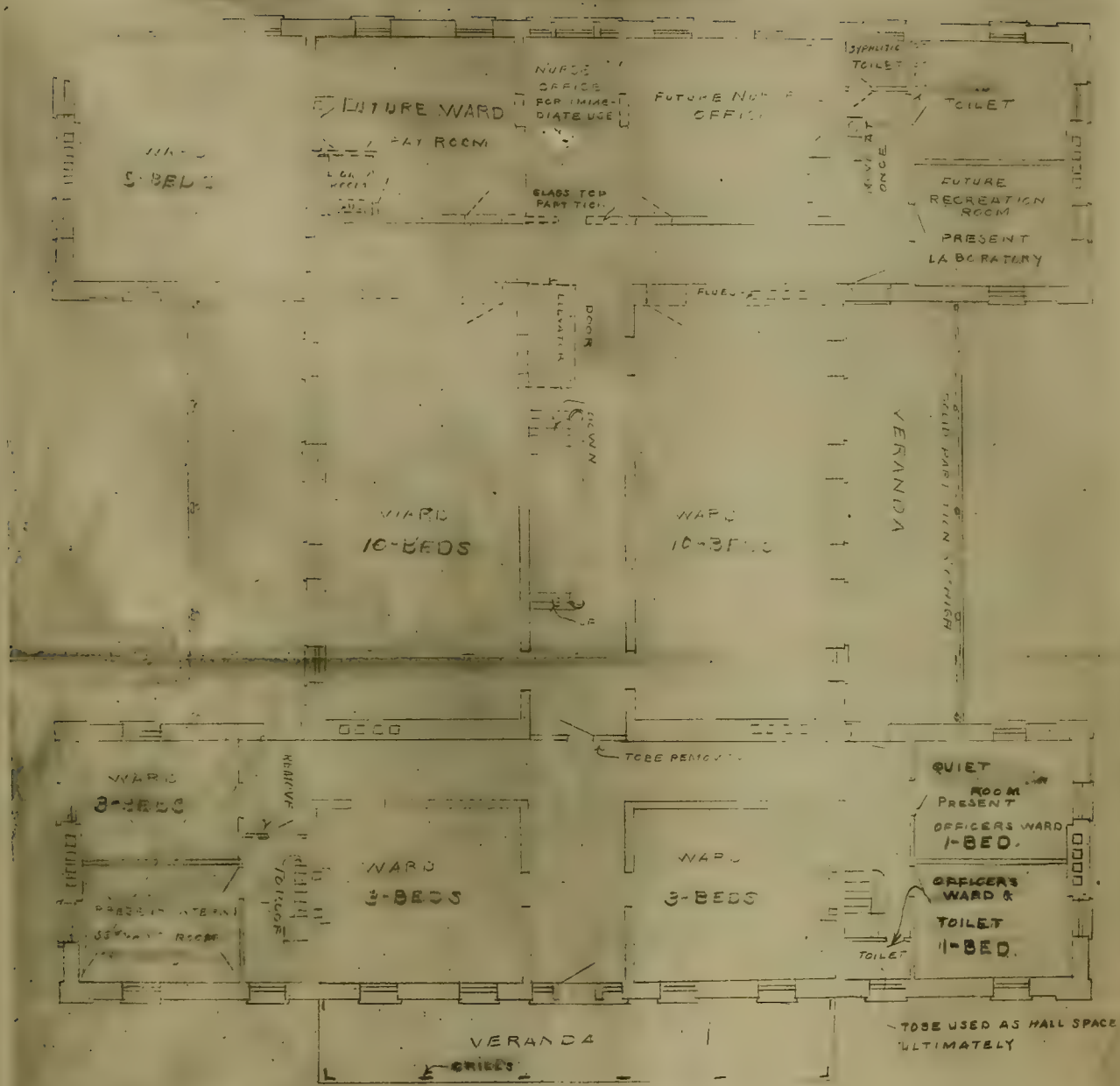


SECOND FLOOR PLAN

SCALE 1/8" = 1'-0"

MARINE HOSPITAL.

PORTLAND, ME



THIRD FLOOR PLAN
CHANGES TO ULTIMATE CAPACITY
INDICATED BY DOTTED LINES

U S MARINE HOSPITAL
PORTLAND, ME.

SCALE 1/8" = 1'-0"

MISS. DRAWING No 632

· VIEWS · OF ·
· U·S·MARINE · HOSPITAL ·

· PORTLAND · ME ·

· HOSPITAL · BUILDING · FRONT ·

· MAIN · BUILDING · & · GROUNDS ·

· BUILDINGS · FROM · REAR ·

· BUILDING · & · VERANDA ·

· CLOSE · VIEW · OF · VERANDA ·

· SHOWING · ASH · DUMP ·

· INSOLATION · HOSPITAL ·

· POWER · PLANT ·

· VIEWS · OF · U·S·MARINE·HOSPITAL·

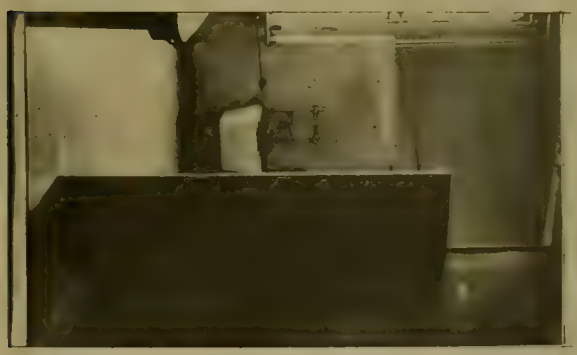
· PORTLAND · ME ·

· WARD · ROOM · MAIN · B'LD'G ·

· WARD·ROOM·ISOLATION·HOSPITAL ·

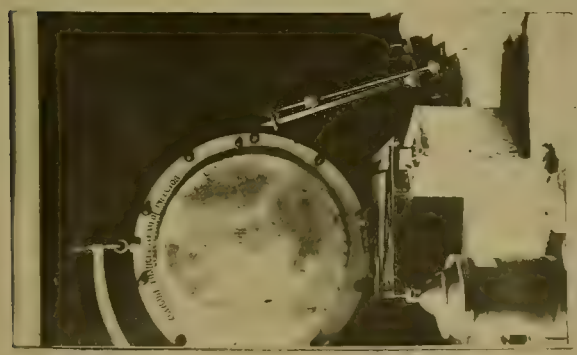
· VERANDA · FOR · SOLARIA ·

· TOILET · IN · OPEN · HALL ·



· TOILET · IN · OPEN · HALL ·

· · NECROPSY · ROOM ·



LEAN · R'M FOR · STEAM · STERILIZER ·

VIEWS OF U.S. MARINE HOSPITAL

PORTLAND, ME.

OLD STORAGE & SCALES.

STABLES.

GATE, NEAR CENTRE STREET.

GATE, WITHOUT DRIVEWAY (INSIDE).

STAT ON WHARF.

LANDING WHARF AT BRIDGE.

OLD BATH HOUSE AT BEACH.

OLD BATH HOUSE AT BEACH.

Report on the Marine Hospital at

PORTLAND, ME.,

for the fiscal year 1915

Total number patients treated	559
" " " " in hospital	196
" " " furnished office relief	363
" " days hospital relief was furnished	6,457
" " times office " " "	490
Amount expended, exclusive of medical supplies. . . .	$ 22,333.09
" " inclusive " " "	23,391.47
" " for office relief.	490.00
" " " hospital "	22,901.47
" " per patient per day.	3.55
Normal bed capacity	38
Maximum bed "	45
Number commissioned officers on duty.	1
Number other officers on duty	3
Number attendants on duty	12
Average daily cost of ration.	$ .466
Average number of patients per day.	18

Cost 16 cents

Report of the Health Department of

PORTLAND, ME.,

for the fiscal year 1915

Total number patients treated	[illegible]
" " " " in hospital	[illegible]
" " " furnished office relief	[illegible]
" " days hospital relief was furnished	[illegible]
" " times office " " "	[illegible]
Amount expended, exclusive of medical supplies. . . .	$[illegible]
" " Sanatorium " "	[illegible]
" " for office relief.	[illegible]
" " " hospital "	[illegible]
" " per patient per day.	[illegible]
Visits for dispensary	[illegible]
Visits for bed	[illegible]
Number consultations clinics on [illegible]	1
Number other visits on [illegible]	[illegible]
Number attendants on [illegible]	[illegible]
Average daily cost of patient.	[illegible]
Average number of patients per [illegible]	18

JTC

September 22, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Portland, Maine.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

The Secretary of the Treasury.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

PORT TOWNSEND, WASHINGTON.

By:-

B. A. CARMICHAEL,
Senior Surgeon, U. S. P. H. S.

H. V. PERRY,
Supervising Superintendent,
Construction, U. S. P. H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

U. S. MARINE HOSPITAL, PORT TOWNSEND, WASHINGTON.

Report of inspection made March, 1915, with recommendations as to policy to be pursued.

I.

GENERAL CONSIDERATIONS.

(1) Location.

The hospital reservation at Port Townsend, Washington is located on a bluff in the southeastern part of the city proper, in the rear of Point Hudson and overlooks the waters of the straits of Juan de Fuca, to the northwest, with Vancouver Island in the distance, Puget Sound to the eastward and Port Townsend Bay and Long Harbor to the south and east.

The location is salubrious and commanding and presents an extensive view of snow-capped mountains, forest clad foot hills, diversified skies and blue waters of the Sound. To the north is Mount Baker and the Inlet range, to the eastward Mount Ranier and to the southward the Olympic range.

The reservation comprises about 2½ acres and is bounded on the south by Quincy Street, on the north by Madison Street, on the east by the edge of the bluff and Jefferson Street and on the west by Clay Street. It is divided by Franklin Street into two plots or portions. On the plot west of Franklin Street the hospital buildings are located and in the rear of this portion is a small orchard. The plot east of Franklin Street overlooking the bluff and city beneath is used for garden and orchard purposes. The buildings are a hospital of brick basement and wood superstructure somewhat cruciform in design or outline and consisting of a central octagon four stories high with central cupola and five floors including the basement, two ward extensions north and south of two stories, an extension of four stories on the east and a smaller one of three stories on the west side.

The other buildings are a barn (former mortuary) small fumigating shed, and a chicken shelter on the lot west of Franklin Street and on the lot east of that street is a green house.

The grounds are beautifully turfed, well kept and contain a number of fruit trees and shrubs of various kinds. A handsome and substantial iron fence incloses the grounds on which the hospital building is located and cement walks lead to the entrances at the east and west sides of the central octagon.

The plot to the east of Franklin Street is inclosed by a wooden picket fence and is largely devoted to garden and recreation purposes.

(2) History.

Provision for the care of sick and disabled merchant seamen in the Puget Sound region was made as far back as the late fifties, as there is a record of a Marine Hospital having been established at Port Angeles and

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abandoned and sold by the Government in 1868.

In 1859 Dr. P. M. O'Brien, a contract surgeon, built a wooden building for himself and family and several small white-washed barracks for patients on block 91 which he afterwards sold to Dr. G. V. Calhoun, who was succeeded by Dr. Thomas T. Minor, who erected additional buildings of cheap construction and plain exterior for the accommodation of patients at Port Townsend, and also acquired block #102 on which the present hospital now stands and which was used as an orchard for the benefit of the patients.

On October 11, 1892, the buildings and land owned by Dr. Minor were purchased by the U. S. Government, for the Marine Hospital Service, for the sum of $12,000.00. The old buildings were used for hospital purposes until September 9, 1893 when the principal ward and some of the out-buildings were destroyed by fire, originating in the oil and lamp room. Temporary accommodation for the patients was secured by renting buildings in the neighborhood and on March 3, 1893 an appropriation of $30,000.00 was made by Congress for the erection of a Marine Hospital at Port Townsend.

Plans were prepared by the Supervising Architect and a contract for the erection of the new building was made on February 9, 1895 with Mr. D. W. Starzat of Port Townsend. The building was completed in the latter part of the year 1895 and furnished and opened for the reception of patients, on January 29, 1896.

(3) Need for a Marine Hospital.

This station is an important point as it is the gateway of entrance to Puget Sound, all coastwise and foreign shipping bound for sound points passing this place.

Relief to sick seamen has been given by the Government since the fifties and the indications are that it will be continued. Investigation of the records of the station shows that less than 50% of the patients admitted to hospital at Port Townsend are sent from Seattle, the remainder being admitted at Port Townsend and from the smaller ports on Puget Sound. At present there is an average of 44 patients per day at this station.

(4) Adequacy of Plant.

The plant is adequate for present and future needs. A rearrangement of the rooms used for quarters by the Acting Assistant Surgeon and the Pharmacist would give sufficient space for all needed ward and executive purposes.

Too much space in the building is given over to quarters for the use of the Acting Assistant Surgeon and Pharmacist. As the station is likely to be continued it should be thoroughly equipped and kept up to a modern hospital standard.

It would be well to provide quarters for the Acting Assistant Surgeon outside of the hospital. The medical officer in charge has no quarters at the hospital.

(5) Acquisition or Disposal of Land.

The present reservation of 8½ acres is ample for all anticipated needs and while a small portion is separated by Franklin Street which is somewhat inconvenient, the lot is needed and desirable for summer use.

(6) Future Development or Disposal of Plant.

The present location of the hospital is a satisfactory one to serve the needs of the Puget Sound district. The plant should be continued in use and kept up to modern hospital requirements. If additional bed capacity should be required a third wing can be constructed in the rear of the central portion as contemplated in the original plans.

II.
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED

(1) Appropriations for Repairs and Preservation of Public Buildings (for details see appendix A)
Total estimated cost of work recommended, $ 3950.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended, 5450.00

(3) Legislative Appropriation for New Construction (for details see appendix C)
Total estimated cost of work recommended, 750.00

(4) Appropriations for Administrative Equipment (for details see appendix D)
Total estimated cost of items recommended, 6393.00
Total..... $16,543.00

(5) Personnel- Adequate.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, Main Hospital Building. Wood framed on brick basement. Clapboard exterior. Shingle roof. Four stories in central part. Two high stories in wings used as wards. Cement floor in basement except patients dining room which is hard maple, and pharmacist kitchen and dining room which is 5/4 D & M pine.

Operating room has porcelain tile floor. All other floors are rift hard pine. Plastered walls and ceilings throughout building, painted. All base and trim is Oregon Fir, varnished. All pine floors are in bad condition, due to using too much water in washing, which has rotted it in some portions and warped it in others. All rooms used for hospital purposes need repairs. Steam heat. Gas and electric light. Floor area 25968 Sq. ft.

Building No. 2, Barn and old Necropsy. One story wood frame on brick piers.

Clapboard exterior. Shingle roof. No interior finish or paint. 12" plank floors. No heat. No light, Floor area 427 square feet. Building is old and in in bad repair, but should be remodeled into necropsy and stores for unserviceable property.

Building No. 3, Fumigating House. One story wood frame on wood posts, clapboard exterior. Shingle roof. D & M sheathed walls and ceilings, unpainted. 3¼ D & M pine floors. No heat. No light. Floor area 60 sq. ft.

Building No. 4, Chicken House. One story wood frame on wood posts. Board and batten exterior. Shingle roof. No interior trim. No heat. No light. Floor area 135 square feet.

Building No. 5. Hot House. One story wood frame on wood posts. Clapboard and glass exterior. Shingle roof. No interior trim. 3¼ D & M floors. No heat. No light. Floor area 160 square feet. Building is in bad repair and should be remodeled at a cost of $150.00.

(2) Offices.
At present there is one room used for this purpose by both the medical officers in charge and the Pharmacist. It is a small room crowded with furniture, books and records and is not large enough for such a dual purpose. It is located to the right of the main entrance on the first floor. Directly across the hall are two rooms, now used by the Pharmacist, as a sitting room and bedroom which no doubt were originally intended for office and examining purposes. These rooms should be taken away from the Pharmacists allotment of quarters and one used for a Surgeons office and the other as an examining room. A new carpet is needed for the present office.

(3) Visitors Reception Room.
There is no special room for this purpose. Visitors are received in the rotunda of the first floor and in the Pharmacists office.

(4) Examining Room.
No room for this purpose. Examinations of patients made in the surgical dressing room, pharmacy and the wards. No room for examination of eye, ear, nose and throat cases.

(5) Kitchen and Diet Kitchens.
The hospital kitchen is located in the basement of the central part of the building. It is a large room well lighted and fairly equipped. Warming tables and kitchen utensils are needed.

There is no diet kitchen. Food is sent from the kitchen to the wards by dumbwaiter and carried in trays to the bedside. There is no means of warming food after it leaves the kitchen.

(6) Pantry and Food Storage.
A large pantry adjoins the kitchen and another room for this purpose is located directly across the small hal from the former. Both are convenient to the general dining room and adequate for the purpose.

(7) Store Rooms.
Linen, baggage, general stores, subsistence, vegetables, unserviceable

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property and medical stores, have rooms used for these purposes located in the north and west portions of the central part of the basement. They are adequate for present needs. The baggage room should be provided with steel lockers for storing the patients clothing.

The attic of the hospital and the old building known as the barn are also used for general storage purposes.

(8) Quarters for Officers.
The only officers quartered in the building are one Acting Assistant Surgeon and one Pharmacist.

Acting Assistant Surgeons Quarters.
Five rooms of these quarters are located in the west extension of the central part of the building on the second floor, viz., parlor, dining room, bedroom, kitchen and bathroom. On the third floor and in a corresponding location and directly above the former rooms there are four bedrooms and a bathroom, making in all a total of ten rooms for the use of this officer. At least one half or the whole of these rooms should be restored to the hospital for executive and other purposes and the Acting Assistant Surgeon quartered outside of the hospital.

These quarters are fairly furnished but some new articles would be needed if they are continued in use.

Pharmacists Quarters.
These consist of three bedrooms and a small bath room located in the north east side of the second floor of the octagon in the central part of the building, a sitting room, two bedrooms, and a bath room in the central part of the building on the first floor and a kitchen and a dining room in the west extension of the basement. In all nine rooms for this officer and the Acting Assistant Surgeon has ten rooms. There is a total of nineteen rooms in this small hospital used as quarters by these two officers.

These quarters should be cut down in the allotment of rooms and the rooms on the first floor, particularly, used for office and executive purposes.

(9) Quarters for Attendants.
One nurse is located on the first floor in the central part of the building adjoining the Hamilton ward on this floor, one on the second floor in the same relative position, and ten attendants are quartered in the different rooms in the octagonal part of the fourth story of the building.

The quarters are adequate and fairly furnished but some new articles are needed, such as rocking chairs.

(10) Patients Dining Room.
Located in the south wing of the basement. It is a large room well lighted but the basement floor is beneath the ground on the outside of the walls and in the absence of water proof courses and drainage is subject to dampness and exudation of water through the walls. This should be corrected by installing ventilators below the floor with areas built around registers through outside walls.

(11) Officers' and Interns' Dining Room.
No room for this purpose. The Acting Assistant Surgeon has a dining room located in the west extension of the second floor of the main building and the Pharmacist one in the end of the same extension in the basement.

(12) Attendants' Dining Room.
The general dining room in the basement of the south ward is also used by the attendants, a separate table being provided and the meals served at different hours. Iron stone china, table linen and chairs are needed for this room. (See administrative equipment sheet)

(13) Recreation and Smoking Room.
Located on the north side of the octagonal part of the building on the second floor. It is a large well lighted room, truncated in shape and sufficient for the purpose. It needs new chairs and settees.

(14) Disinfecting Facilities.
The present disinfecting facilities consist of a small sulphur fumigating house located in the yard where bedding and other similar equipment is treated. This equipment is inefficient and should be abandoned (and a steam sterilizer installed in the present basement next to the boiler room where steam pressure and service can easily be made available at small cost). There is a dressing sterilizing and wash-up room, also a Key-Sprague water sterilizer, steam heated. A utensil sterilizer should be supplied for the sterilizer room.

(15) Incinerator.
There is none. A water jacketed incinerator should be installed in the boiler room. House garbage is disposed of by contract and is removed two and three times per week in winter and summer respectively.

(16) Disposal of Soiled Linen.
Removed from the wards and rooms by hand and sent to the linen reception room in the basement through the metal lined linen chutes extending from the basement to the different floors. Then bundled in sheets and sent to laundry contractors in the city. No laundry in the building. Infected linen is soaked in 5% carbolic solutions and sometimes fumigated and then sent to laundry in the usual manner.

(17) Laundry Facilities.
There are none. Laundry work is done by contract which is satisfactory and economical.

(18) Operating and Surgical Dressing Room Facilities.
The operating room is located in the bay window extension of the north ward on the first floor. It is a good sized room, well lighted and adequate for the needs of the station. The equipment is fair but some new instruments and operating gowns are required to replace old ones worn out. Anaesthetics are given in the wards and in this room.

Sterilizing and Wash-up Room.
This is a small room directly in the rear of and adjoining the operating room. It is adequate for the needs of the station in size and equipment.

Surgical Dressing Room.
This is located on the west side of the rotunda and adjoining the surgical or north ward on the first floor (Lyman ward). It is a fair sized room, well lighted conveniently located and suited for the purpose. A case for holding dressings and a few glass jars for the same purpose are needed.

(19) X-Ray Equipment.
A room for this purpose is located opposite the surgical sterilizing room at the north end of the surgical ward on the first floor. It contains an old Otis and Clapp Static machine operated by hand. This is in bad order, gives poor results, is inadequate for the needs of this isolated station and should be replaced by a modern apparatus. No local institutions or x-ray equipment are available at Port Townsend.

(20) Laboratory.
This is located in the bay window extension at the end of the north ward on the second floor. It is a good room well lighted and sufficiently equipped for ordinary clinical work.

(21) Dispensary.
This is a good sized room located in the eastern extension of the central part of the building on the first floor and near the office. It is well furnished and is adequate for the needs of the hospital.

(22) Wards for Seamen.
There are two wings of two stories each containing a general ward on each floor or a total of four wards.

The wards are exposed on both sides and are light and airy. The ceiling heights, 18 and 19 feet, are unusual and greater than is necessary. The ward on the first floor, east wing (Lyman ward) is used for surgical cases and the other wards for medical. There is no special ward for tubercular cases, one of the small private wards being utilized for this purpose. At the present time the ward on the 2nd floor of the east wing is not in use.

(23) Quiet Wards.
There are 3 small rooms on the 3rd floor of the executive portion which are available for quiet wards or for special cases. One of them is provided with removable screens so that it can be used for restraint cases if needed.

(24) Ward for Revenue Cutter Officers.
One room on the 3rd floor of the executive portion is set aside for this purpose. It has no special toilet. The room originally designed for officers ward on the second floor with adjacent bath is now used as a part of the Pharmacists quarters.

(25) Toilet Facilities.
The toilet facilities are adequate and well distributed throughout the building and while not of modern design are sanitary and in good working order.

(26) Portable Tubs.
There are two on hand, both without racks. One is fastened to the drain

in the bathroom of Brattain ward and used as a stationary tub. Few cases of typhoid fever are admitted to hospital at Port Townsend.

(27) Padded Cells.

There is one room in the west end of the second floor of the octagon part of the building which is sometimes used for the detention of violent alcoholic or insane cases. It is fitted with heavy wire screens for the windows but the walls are not padded. There is an old humane restraint apparatus on hand but no restraint sheet. Insane cases can be transferred to the sanitarium of the Sanitarium Company at Portland Oregon, on authority of the Bureau.

(28) Morgue Facilities.

There are none at present. Space originally assigned in the barn has become untenable by reason of decay of floors and general bad condition of space provided.

(29) Isolation Facilities.

The only space available for isolating contagious cases is in the small rooms assigned as private wards. A tubercular patient is now quartered in one of these.

Three tent houses should be provided for this purpose and to care for tubercular cases.

(30) Out-Patient Office.

No separate office maintained for this purpose. Out-patients are treated at the hospital as it is only a short distance from the waterfront.

(31) Floor Space.

The total net floor area in the main hospital building is as follows:

" " " "	Basement	5,443	square feet.
" " " "	First Floor	5,820	" "
" " " "	Second Floor,		
	Executive portion	2,614	" "
" " " "	Third Floor.		
	Executive portion—		
	and 2nd floor wards	5,631	" "
	Fourth Floor	1,478	" "
		20,786	" "
Total hall space		5,182	
Total		25,968	" "

Total net floor space for hospital uses is	60%
" " " " " quarters (except halls) is	20%
" " " " " hall space (including quarters) is	20%
	100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 65 beds, maximum 83, utilizing all four of the main wards.

On a normal basis each patient has 95 square feet of floor area and

1700 to 1800 cubic feet of air space. The unusually large air space is due to the exceptional height of ceilings 18 and 19 feet.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913 and 1914 and also for the first 8 months of the fiscal years 1913 and 1914.

	Fiscal Years			1st 8 months. Fiscal years.	
	1909	1913	1914	1914	1915
Number days hospital relief furnished	15630	13626	16245	10870	11454
Daily average hospital patients	42.8	37.3	44.6		
Total daily cost per hospital patient	$1.36	$1.27	$1.13		
Number of hospital patients	879	688	773		
Number of outside patients	177	99	84		
Number of times treated	450	152	170		

On March 20, 1915 there were 48 patients in the hospital of whom 4 were chronics and one tubercular.

The maximum in the hospital during the past 7 years was 61 in December 1914, minimum 19 in April 1911.

The number of days hospital relief furnished in 1914 was 4% greater than in 1909 and 19% greater than in 1913. For the first eight months of the present fiscal year the increase has been 5% over the same period of the preceeding year. The out-patients has steadily decreased during the first five years, the number treated in 1914 being about half those in 1909. The number of times treated has fallen off in greater proportion.

The following table shows the origin of patients admitted to the hospital for fiscal years 1913, 1914 and for period from July 1, 1914 to March 20, 1915.

Admitted From	1913	1914	July 1, '14 to March 20, '15.
Seattle	76	113	76
Port Townsend	156	135	78
Portland	1	3	2
Bellingham	4	2	-
Roquiam	3	-	4
Tacoma	2	1	-
Aberdeen	1	1	-
Petersburg, Alaska	3	1	1
Juneau, Alaska	1	-	-
Foreign seamen	5	5	3
Total admissions	252	261	164

The proportion of hospital patients transferred from Seattle was 30% in 1913; 43% in 1914, and 46% from July 1, 1914 to March 20, 1915.

(34) Ambulance Service.
This service is provided under contract at $0.25 per trip, taxicab service. There is no regular ambulance; patients being transferred by automobile. In case of necessity, a stretcher is used. Facilities are adequate and satisfactory.

(35) Heating, Power Plant and Ventilation.
The hospital building only is heated, by direct low pressure steam radiation. Steam supplied from two low pressure horizontal return tubular boilers in standard brick settings (which are so badly cracked as to need resetting, and standard shaking grates for wood fuel). Oil burners should be supplied which would effect a substantial saving annually. The cost of installation would be about $1200.00.

There is a Warner Bros. hand power elevator and a dumb-waiter of the same make and kind of power. These should both be changed to electric power in accordance with plans now in the office (Supt. Newman's recommendations in this respect are not concurred in).

There is also one Hamilton Low Company, New York, Motor and Dish-washing Machine. Motor 110-volt, A.C. 2-phase, 7.4 ampere (New).

Ventilation by upper and lower wall registers to outside of building at their respective levels, which is ample and satisfactory under local conditions, but the principle is not endorsed for general use. Corrected prints for elevator well attached hereto.

(36) Illumination.
The building No. 1 is lighted primarily with electricity with gas auxiliary, the latter of which is seldom used for lighting. (Though it is used as fuel for sterilizers and gas ranges.) Fixtures are abundant and except those in the wards are satisfactory. The fixtures in the wards should be changed to inclosed single drop fixtures or at least frosted lamps used in these locations.

(37) Decoration.
The decoration throughout the building is unusually attractive and satisfactory, the colors being cream and buff of soft shades.

Woodwork is dark red but as the rooms are very light and cheerful, the small amount of dark trim is not objectionable.

(38) Telephone and Call System.
The hospital has one telephone, with private extensions in Surgeons quarters, direct connection to the city exchange of the Citizens Independant Telephone Co. There is no intercommunicating telephone system. A large gong on the fourt floor with push button on first floor is used to call the various attendants. An intercommunicating telephone of 8 to 10 stations should be provided.

(39) Ice and Refrigerating Facilities.
Artificial ice is supplied from a local plant and while the price and service is not the most satisfactory, the service is the only one available. A refrigerator plant of small capacity would be desirable and economical, and can be installed in present meat room.

(40) Water Supply and Fire Protection.
Water is obtained from city mains in Clay street through 2-inch connection to main building.

The source of the city water supply is Snow Creek and the supply is by gravity to reservoir on Morgon Hill within the city limits. The quality is excellent and quantity ample.

The pressure at the hospital is 80 pounds which is reduced by pressure reducing valve to 40 pounds and is the pressure available for all hose connections as well as plumbing fixtures. Reducing valve is by passed so that full city pressure can be utilized in case of fire.

There are four hose reels, one on each floor of main building with 100 feet of 1½-inch rubber lined cotton hose on each. There are no fire hydrants on the reservation or other hose reels but the city has two 2 way fire hydrants on street intersections at opposite corners of the block on which the hospital buildings are located.

There are five chemical fire extinguishers, four of which are old type.

The city has volunteer fire department with fire engine house, three blocks away.

The four old type extinguishers should be disposed of and nine new fire extinguishers, 3 gallon underwriter type, should be supplied.

One wheel hose reel with 300 feet of 2½-inch fire hose, city thread, and two nozzels should be supplied for use with hydrants. One hose reel with 50-feet of 1½-inch hose is required in the barn. One-hundred feet of 1½-inch hose should be kept on hand as a reserve.

(41) Fire Alarm System.
A bell is provided in the hall of the first story of the main building which is struck by hand. Drills are held weekly. City fire alarm box is located in front of reservation. Facilities adequate.

(42) Sewer and Other Drainage.
Both storm water and sewage is discharged through 8-inch cast iron main into city sewer at foot of bluff on Jefferson Street. Facilities are adequate and in good condition.

(43) Streets, Roads, Walks, Fences and Grounds.
There is a gravel driveway in the rear of the hospital connecting the entrances to the grounds on Quincy and Madison Streets. A cement walk is now being installed to rear of building from entrance on Quincy Street.

The block on which buildings are located, north of Franklin Street, is provided with cement sidewalk on all four sides.

The portion of the reservation comprised by the block south of Franklin Street has a wood sidewalk on Franklin and Quincy Streets and incline to woodwalk on Jefferson Street at foot of bluff. The walk on Franklin Street is in poor condition and the others in fair condition. These walks should be repaired by station force and retained as woodwalks. Cement walks are not needed.

The driveway and other walks are in good condition and adequate.

The block south of Franklin Street is inclosed by a wood picket fence, and the block north of Franklin Street has a wooden picket fence on Clay Street and iron picket fence on the remaining three sides.

There is a carriage entrance on Madison Street, a carriage and pedestrian entrance on Quincy Street and a private entrance to hospital building on Franklin Street.

There is also a wooden picket fence inclosing a chicken yard and orchard in the rear of the hospital building.

Fences are in good condition and adequate.

The hospital is situated on bluff overlooking the bay in blocks north of Franklin Street. The grounds and buildings are well kept and present a neat and pleasing appearance.

(44) Wharves, Sea Walls, Etc.
None. No waterfront.

(45) Live Stock, Vehicles, Etc.
None, and none required.

(46) Personnel.
There are on duty at this station: one commissioned officer; one acting assistant surgeon; one pharmacist and twelve attendants classified as follows:- One engineer; one messenger; one gardener; two cooks; two waiters; three nurses; one night nurse and one hallman. This force is sufficient for the work of the station.

(47) Records.
The records are in good order and with a few minor exceptions (subsistence record and some of the clinical records) are properly kept.

(48) Books.
The medical books in the station library are mostly old and out of date.

(49) Purchase of Supplies.
Supplies are purchased on yearly contract obtained in the usual manner and is satisfactory for this place.

Neither three months accepted proposals or purchases in the open market would have any special advantage over the contract method in such an isolated station as Port Townsend.

APPENDIX A.

Marine Hospital at Port Townsend, Wash.

Appropriation for Repairs & Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
10	Ventilating space below patients' dining room floor and build areas around registers.	$300.00
22	Remodeling and repairing building No. 2 for morgue and storage uses.	1200.00
36	Preparing elevator shaft for electric vs. hand elevator.	300.00
35	Preparing dumb-waiter shaft for electric vs. hand dumb-waiter.	100.00
1	Repair to hot house.	150.00
38	Intercommunicating telephone system.	1000.00
40	Hose, hose reels and 9 chemical fire extinguishers, 3 gallon underwriter type.	800.00
43	Repairs to wooden walks.	100.00
		$3950.00

5.3

APPENDIX B.

Marine Hospital at Port Townsend, Wash.

Appropriation for Mechanical & Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
14	Running steam line from boilers to new sterilizer when placed in adjoining room.	$ 50.00
35	Electric elevator in present shaft.	3000.00
36	Electric dumb-waiter in present shaft.	400.00
39	1/4 ton refrigerating plant in basement of building No. 1.	2000.00
		$5450.00

APPENDIX C.

Marine Hospital at Port Townsend, Wash.

New Construction

- - - - - -

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
29	Three tent houses	$750.00

APPENDIX D.

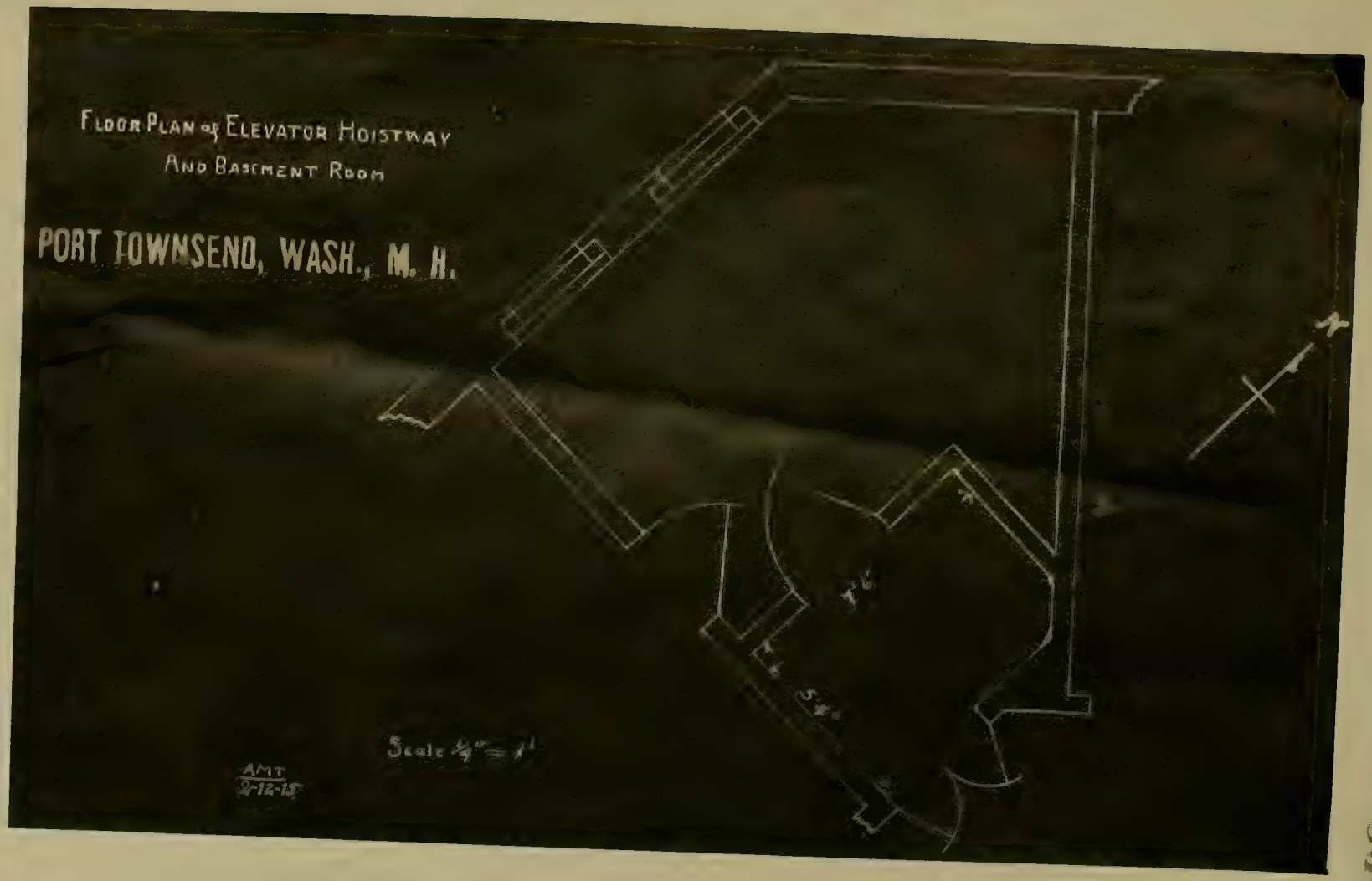
Marine Hospital at Port Townsend, Wash.

Administrative Equipment

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	Estimated Cost.
14	Steam sterilizer	$1000.00
8	Offices	45.00
22	Wards	738.00
18	Operating and surgical dressing rooms	166.00
19	X-ray equipment	1850.00
5	Kitchen and diet kitchens	225.00
10	Dining rooms	236.00
6	Quarters for officers	575.25
9	Quarters for attendants	99.00
14	Steam sterilizer for basement room	1000.00
15	Water jacketed incinerator	150.00
36	Bar fixtures for ward rooms	200.00
		$6293.25

8.


FLOOR PLAN OF ELEVATOR HOISTWAY
AND BASEMENT ROOM
PORT TOWNSEND, WASH., M. H.
Scale ¼" = 1'
AMT
9-12-15

ATTIC
Floor joists 3x12"
FRONT ELEVATION
ELEVATOR SHAFT
U.S. MARINE HOSPITAL
TOWNSEND,
WASHINGTON

HOSPITAL BUILDING (FRONT)

HOSPITAL BUILDING (REAR)

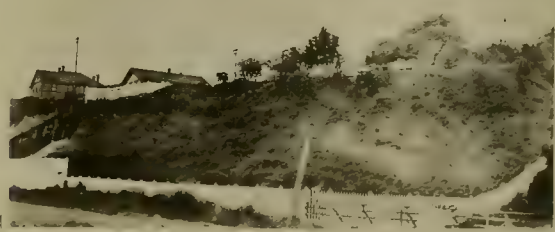
HOSPITAL & STABLE

STABLE & FUMIGATING BUILDING

CHICKEN HOUSE & ORCHARD

GREEN HOUSE

GROUNDS IN BLOOMING, 91



WYMAN WARD

HAMILTON WARD

WOODWORTH WARD

BRATTON WARD

LABORATORY IN BRATTON WARD

ATTENDANTS' DINING ROOM

OPERATING ROOM

SURGICAL DRESSING ROOM

PORT TOWNSEND WASHINGTON

SURGICAL DRESSING ROOM

SMOKING ROOM

DAMAGED BASEMENT FLOOR

GREENHOUSE & YARD BLOCK NO.91

FRANKLIN STREET FRONT

JTC

October 12, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospital and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Port Townsend, Wash., with the exception that the medical officer in charge or the acting assistant surgeon should be quartered in the building as the station should not be left without an officer as his services might be required at any moment to attend to a sick or injured patient.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

(Signed) Rupert Bine.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITEDSTATES MARINE HOSPITAL

at

ST. LOUIS, MISSOURI.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent
of Construction, U.S. P.H.S.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

Report of inspection made December, 1914, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The hospital reservation at St. Louis, Missouri, is situated in the southern part of the city, near the north bank of the Mississippi River; faces on Marine Avenue, is irregularly quadrilateral in form and bounded on the north and east by Miami Street, the baseball grounds and adjoining property, on the south by Kosciusko Street and on the west by Winnebago Street and Marine Avenue. The grounds are spacious, level throughout with the exception of two ravines on the east side. The grounds are cultivated and well sodded on the western half, but the remainder of the reservation to the east and south is uncared for and usually covered with a profuse growth of weeds. There is a substantial iron fence on Marine Avenue in good condition and on the other boundaries of the grounds there is a wire fence, now in bad repair. There are a few trees along the west, north and south sides, and others scattered throughout the reservation.

The reservation comprises about thirteen acres and is located in a not very desirable portion of St. Louis. It is about three miles distant from the city hall and there is a convenient car line to the city on Broadway two blocks above the hospital.

The buildings consist of the old Marine Hospital, built and occupied in August, 1855. It is built of brick with limestone basement and consists of three stories, an attic and cupola, and the pavilion group, which consists of a brick executive building with granite basement and three one-story pavilion, wards extending from a connecting corridor from the rear of the executive building. There is also a heating and laundry plant located to the east of the south ward and an isolation house and mortuary located in the rear of the buildings to the eastward.

(2) History.

The Commission appointed by the President of the United States under the Act of Congress of March 6, 1837, recommended that St. Louis was especially in need of a Marine Hospital.

An Act of Congress approved August 29, 1842, appropriated the sum of $7,468.00 for the erection of a small hospital. No action was taken and, owing to the lapse of time, this amount reverted to the Treasury. In this year contract was made to care for the patients of the service in Charity Hospital at an expense of $3.00 per week. In 1843, $10,000.00 was appropriated for erection of a Marine Hospital at St. Louis and in 1849 this was increased by an addition of $20,000.00. A site was selected on what was known as magazine lot, about one-half mile from the U. S. Arsenal, between carondelet Avenue and the Mississippi River, and this was transferred by the War Department for hospital purposes. The hospital was built and occupied

on August 1, 1855. It was a substantial brick structure with granite basement, three stories, attic cupola. The building is in the form of a parallelogram, 67 X 108 feet, and on the east and west sides are porticos attached to each story.

During the Civil War this building was used as a military hospital and in order to increase the capacity for the reception of patients, barrack wards 451 feet long and 19½ feet in width and 9½ feet high, roughly finished, were erected north of the main building. During the occupancy of this building as a military hospital the marine patients were cared for at the Sisters Hospital. From May 4, 1862 to June, 1866, 4590 soldiers were admitted to treatment. On September 25, 1866, the hospital was returned to the Service and the care of sick and disabled sailors of the merchant marine in the hospital was resumed.

The hospital was in charge of local physicians until September 5, 1879, when a regular officer, Assistant Surgeon Walter Wyman (late Surgeon General) was placed in charge. Since that time the hospital has been in charge of officers of the Service.

In 1879 the sanitary condition of the building became so bad that the old barrack wards used by the Army were repaired and the patients removed from the main building and treated therein.

On September 15, 1881, the present executive building was begun. It was completed and occupied on February 15, 1882, and three pavillion wards of one story each with dining and nurses' rooms at one end and recreation and toilet rooms at the other end were completed in 1885, at a cost of $33,700.70. The brick laundry with basement for a steam heating plant was completed in the same year.

The old building since that time has been used for administration purposes, kitchen and dining rooms, and quarters for officers and attendants.

(3) Need for a Marine Hospital.

Relief for sick and disabled riverman has been given by the Government since 1855, a period of 60 years. It is probable that a hospital will always be needed at this station, as St. Louis is the most important river port above New Orleans and the logical point for the maintenance of a marine hospital.

(4) Adequacy of Plant.

It is not deemed advantageous to the Government's interest to expend any money on this plant for permanent improvements looking to a continuation of the existing layout for a marine hospital. A new plant of modern construction with the capacity of 100 beds should be provided in a more desirable locality.

The immediate repairs and minor betterments needed to keep the plant in operation, pending its definite disposal, should, however, be made, and are provided for under Section III.

(5) Acquisition or Disposal of Land.

The present reservation is becoming less desirable each year as a hospital site by reason of encroachments of manufacturing plants and residential buildings of the poorer class.

It is not convenient to the water front and is in a section where good roads are not available. The property might be exchanged for a more compact site in a locality more desirable for hospital purposes, probably on King's road in the vicinity of other hospital buildings where good conditions generally prevail.

(6) Future Development or Disposal of Plant.

The immediate construction of a new modern hospital plant of 100 bed capacity, located in a more desirable part of the city has been recommended to replace the present unsatisfactory plant.

It is believed that a hospital of this capacity will meet the needs of the station for a considerable period. The proposed plant should, however, be laid out so that if required, extensions can be readily made.

II
SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1)	Appropriation for Repairs and Preservation of Public Buildings. (for details see Appendix A) Total estimated cost of work recommended.	$ 8,035.00
(2)	Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see Appendix B) Total estimated cost of work recommended.	1,550.00
(3)	Legislative Appropriation for New Construction. (for details see Appendix C) Total estimated cost of work recommended.	401,000.00
(4)	Appropriations for Administrative Equipment (for details see Appendix D) Total estimated cost of items recommended.	3,153.00
	TOTAL	$413,738.00

(5) Personnel.

Adequate.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1, Administrative Building, two story and basement, brick superstructure. Stone grade course, sills and lintles, slate roof. Plastered walls and ceilings, above basement, painted, pine base and trim painted. Main hall has marble tile floor and base. Operating and toilet rooms have porcelain tile floor, base and wainscot. Basement has cement floors. All other floors 3" D & M pine. Steam heat. Gas and electric light. Floor area 5,544 square feet.

Open register hole in main hall should be closed up and marble tile floor extended to cover. Plaster and electric conduits in basement need repairs. Both are loose and likely to fall.

Building Nos. 2, 3, & 4, one story wood frame on brick piers. Clapboard exterior, shingle roof, ward rooms have plastered walls. Open King post truss roofs. All other rooms have plastered walls and ceilings. All plaster is painted. Pine base and trim in all rooms except toilets which have marble base. Toilet rooms have terrazzo floors. All other floors 3" D & M rift hard pine. Steam heat. Electric light. Floor areas, No. 2, 3,484, and No. 3, 5,268, and No. 4, 4,372 square feet respectively. These buildings are connected to each other and to buildings Nos. 1 and 5 by roofed verandas and enclosed passage ways, and are very deficient in light area, and very hot in the ward rooms by reason of their having no ceilings. They should have compo board or other ceilings placed in them, with adequate vents through the roof if they are to be continued in use indefinitely.

Building No. 5, Old Hospital Building, is three-story, basement and attic, brick superstructure, slate roof. Now used for quarters, kitchen dining rooms and storage purposes only. All floors, except basement which is brick, are of hard pine, plastered walls and ceilings. Pine trim painted. The building is old and in poor repair as to sanitary equipment and condition of storage rooms. Considerable money has recently been spent on remodeling and more is needed to supply additional quarters for employees now quartered in buildings 2, 3, and 4, which space is desired for wards. Steam heat, gas and electric lights. Floor area 27,440 square feet.

Building No. 6, Heating Plant and Laundry, is a one-story and basement brick building with tin roof. Basement is unfinished, has brick and cement floor. Laundry, wood floors, plastered walls and ceilings, pine trim painted, all in poor condition but needing no definite repairs at this time. Steam heat, gas and electric light. Floor area 2,500 square feet.

Building No. 7, Necropsy Building, is a one-story and basement, wood frame structure, brick to first floor line, dirt floor in basement, wood floor elsewhere, basement unfinished, first floor plastered walls and ceilings, pine trim painted, shingle roof. Stove heat, oil lamps. Floor area 256 square feet.

Building No. 8, Isolation Hospital, is a one-story, no basement wood framed building, with shingle roof, clapboard exterior, wood floor, plastered walls and ceilings, painted, pine trim painted. Condition poor, but needs no specific repairs.

Building No. 9, is a wood framed shed leanto from No. 6 to cover wagon scales. Board and batten exterior, paper covered roof, in fair condition.

Building No. 10, Hose Reel House, one story wood framed on posts, clapboard exterior, shingle roof, D & M floor, and side walls . No heat, no light. Floor area 50 square feet.

(2) Offices.

Surgeons' Office.

Located on south side of first floor of executive building, is a good sized, well lighted room and suitable for office purposes. A new carpet and a new sectional book-case and a new safe are needed for its equipment.

Pharmacist's Office.

Located opposite the Surgeon's office, the same in size and suitability. It needs nothing but a filing case for office records.

(3) Visitors' Reception Room.

There is no special room for this purpose. Visitors are received in the corridor of the executive building.

(4) Examining Room.

No special room. Old operating room in executive building is used for this purpose and surgical dressing room at end of south ward.

(5) Kitchen and Diet Kitchen.

Kitchen. Located on first floor of old hospital building in the east wing, is of sufficient size but needs some new equipment, such as a new gas range to replace the old and worn out coal range now in use. A new sink with double drain board. Medical Officer in charge states that he can construct a dishwasher at the station that will answer every purpose for the sum of $25.00. A gas pipe rack for kitchen utensils is needed, but if the pipe is purchased the engineer at the station can make it. Some new kitchen utensils are needed.

There are no diet kitchens at this hospital. A substitute for these is improvised by Dr. M. S. White in charge, by double aluminum boilers fitted on a ward carriage and in which hot water is the heating agent. In these the food is conveyed warm to the wards from the kitchen and has the advantage of direct transportation to each bed.

(6) Pantry and Food Storage.

There is no pantry room. Supboards in the kitchen and dining room serve this purpose. A subsistence store room and a refrigerator room adjoin the kitchen on the east side. They are convenient and sufficient.

(7) Store Rooms.

Store rooms for medical supplies, hospital stores, records, glassware, etc., are located in the basement of the executive building and are ample for present needs. Store rooms for miscellaneous articles and unserviceable property are located on the third floor of the old hospital building.

(8) Quarters for Officers.

Surgeon in Charge. These quarters are on the south side of the first floor of the old hospital building and consist of parlor, dining room, three bedrooms, two bath rooms, a kitchen and two rooms on the north side of the second floor, one of which is used as a servants' room. They are well furnished and need only two single beds with mattresses and two bedroom tables.

[illegible]

[illegible]

[illegible]

Assistant Surgeon's Quarters.

Located above the Surgeon's quarters on the second floor, have parlor, dining room, kitchen, three bedrooms and a bath room. They are rather shabbily furnished and, except for the dining table, need new furniture.

Internes' Quarters.

Consist of two rooms in west end of center ward, one used as bath and bedroom and one as a sitting room. Furniture sufficient.

Pharmacist's Quarters.

Located on upper story of executive building. Consist of a sitting room, dining room, kitchen, bath room and two bed rooms. Are in good order and amply furnished.

(9) Quarters for Attendants.

Six attendants are quartered on the second floor of the old building, north side, four in the north wing on the third floor and two in the small rooms in the west end of the south and north wards. New furniture and rugs are needed for these quarters to replace old and worn out material. The bath for these quarters now on the first floor should be moved to the second floor for the convenience of the attendants.

(10) Patients' Dining Room.

There is one room for white and one for colored patients adjoining the kitchen on the first floor of the north wing of the old building. Equipment somewhat old and worn. New floors are needed.

(11) Officers' and Internes' Dining Room.

Internes' dining room is a small room on the west side of the first floor of the old building. Table linen is needed. Equipment otherwise sufficient.

(12) Attendants' Dining Room.

Adjoins the kitchen on the first floor of the old building. Equipment fair, a sanitary kitchen cabinet is needed for the room and sanitary glass top tables are suggested for this room and that of the patients to replace old and worn wooden dining tables.

(13) Recreation and Smoking Room.

The only room now used for this purpose, aside from the porches adjoining the wards, are two rooms in the west end of the north ward made by a partition erected in the old dining room of this ward. One room is used for white and one for colored patients. The room designed as a smoking and recreation room in the south ward is used as a surgical dressing room, the one in the center ward for tubercular patients and the one in the north ward as a laboratory.

(14) Disinfecting Facilities.

A Kinyoun Francis double ended machine occupies the unfinished basement of building No. 8. There is a formalin ammonia attachment stored in the room above, which has never been used. These quarters, while adequate, are not desirable but will answer present needs. A cement floor should be laid in this room. Bandages, dressings and instrument sterilizers are located in the dressing room in the rear of building No. 4, also used as an operating room. The equipment is in fair condition only.

(15) Incinerators.

There are none. All bandages, sputum, etc., is burned under the heating boilers. Waste paper, etc., is burned in iron cages at rear of laundry. Wet garbage removed by city, ashes by contract. Arrangement satisfactory for the present only.

(16) Disposal of Soiled Linen.

Soiled linen is removed from the wards and rooms in bundles made by sheets and conveyed by hand to the laundry. Infected linen is sterilized in the steam sterilizer, being handled by an attendant who wears rubber gloves. The infected linen is not immersed in any disinfectant solution, and the steam sterilizer is used only when considered necessary.

(17) Laundry Facilities.

Consist of two washers, one Century dryer, one 34" mangle, one shirt machine, seven hand tubs, and a 16-track steam dry room located on the main floor of building No. 6. The washers and Century dryer, steam room andhand tubs are in good condition. The shirt machine is broken and worn out. The mangle, an old one-roll machine, is in fair condition, but inefficient in drying clothes without running them through the machine several times. A new two-steam roll machine could supplant the present one to advantage. Irons are heated on an old gas burning iron heater which should be supplanted by two electric irons, connections for which can be had in the building.

(18) Operating and Surgical Dressing Room Facilities.

At present the surgical operating room designed and located when the hospital was erected in 1885 is used as an examining room and receiving and waiting room, and an operating and dressing room has been made out of the old smoking room at the rear of the south ward. The instrument and dressing sterilizers and surgical tables were removed to this room about two and a half months ago.

This arrangement of the surgical operating unit does not seem satisfactory and it is recommended that the old operating room be used as originally designed. The corridor of the executive building can be used for a waiting room as at present. The dispensary is large enough to be divided by a partition and making a room for etherizing and sterilizing purposes.

In addition to the partition, a door leading directly into the corridor would benecessary. A surgical dressing room could be made by using the nurses room in the south ward. A door to replace the window looking into the ward would be necessary and possibly removal of the roof of the porch on the south side in order to provide more light, as shown on sketch No. 1 herewith.

The present surgical dressing and operating room can be used for its original purpose, smoking or recreation room, or used as a special ward. An instrument case, operating gowns and lighting fixtures, are needed for the operating room, and for the dressing room a ward carriage and dressing table, as shown on sketch No. 2 herewith.

(19) X-Ray Facilities.

This room is located in the old dining room of the south ward. The outfit consists of an old Scheidel Western ...-ray coil with transformer, slow in action and capable of superficial work only. A radio-stereoscopic table, two X-Ray tubes, and a fluoroscopic screen.

A dark room for developing purposes could be made in a portion of the room. A supply of X-Ray plates and a cabinet for holding plates are needed.

(20) Laboratory.

Located in the old smoking room of the north ward. It needs a new incubator with electric thermo regulator and about $25.00 worth of miscellaneous glassware. Wasserman's are sent to Hygienic Laboratory, Washington, D. C. Ordinary clinical work is done at the station.

(21) Dispensary.

Located in the southeast corner of the first floor of the executive building. It is a good-sized, well-lighted room. It needs repairs to the floor, a new sink and an acid-proof dispensing counter.

(22) Wards for Seamen.

There are three pavilion ward buildings. The south ward building has a main ward 92' long with a normal bed capacity of 22. The main ward of the center ward building is 123' long with normal bed capacity of 30, and that of the north ward 61' long with bed capacity of 14. All these wards are 28' wide. In the center ward building a separate room 28' X 14' at the west end is used for typhoid cases, capacity three beds. At the east end a projecting room, 22 feet by 16 feet, is used as a tubercular ward, capacity three beds. In the north ward a room, 14 feet by 14 feet, at the southwest end, is used for a special ward, capacity one bed. The large wards are open on both sides and have six foot verandas. These wards have no ceilings. They are all dark and gloomy.

The bed capacity given above is under normal conditions. In an emergency a considerably greater number could be accommodated. Colored and white patients are kept separate, colored in the south ward and white in center ward. The north ward is not in use.

(23) Quiet Wards.

There are no wards specifically designated as such. There is a small room at the southeast end of north ward which is used for ward purposes and is available for this purpose.

(24) Wards for Revenue Cutter Officers.

None provided and none needed.

(25) Toilet Facilities.

There is a toilet and bath room in the extreme end of each of the ward buildings each containing three closets in the toilet and one bath tub in the bath room. In the halls adjoining these rooms in each of these buildings is a gang of three lavatories, mounted on one marble slab with marble back, and one new design small slop sink.

In the administration building No. 1 there is a closet and lavatory in the basement. There is a lavatory and bath tub in one suite of attendants' quarters, newly installed. A sink in the laboratory of building No. 3, and in the surgical dressing room in building No. 4. None of these are modern but are satisfactory for present needs. In the old hospital building closets are located on stair landings of each floor and adequate toilet and bath room equipment is suppli in the quarters of the Surgeon and Assistant Surgeon. A bath room on the first floor serves all the attendants quartered in this building. This room is so located that attendants must pass through all the quarters of other attendants, or go into the Surgeon's private hall, which is objectionable.

These fixtures should be moved to the room immediately over head, which will obviate these undesirable features. The entire mechanical equipment needs, and is receiving, renovation under the direction of Supervising Superintendent of M. & E. E., Mr. Hallet. There are no separate toilet facilities for syphilitic patients. Should be provided as shown on sketch No. 3 herewith.

Change toilet from corner in Surgeon's bedroom to location in hall, and refill opening made in wall for entrance. This toilet room has thin wood partitions and the noise is very objectionable.

(26) Portable Tubs.

There is one old tub without a rack which is not used at this station. Typhoid cases are few and when necessary the cold pack is used. A new portable tub and rack should be furnished.

(27) Padded Cells.

None provided for. Violent alcoholic and insane cases are taken care of by the use of a restraint sheet until their removal to special hospitals can be arranged.

(28) Necropsy Facilities.

Necropsy facilities are afforded in building No. 7 and are ample for present needs.

(29) Isolation Facilities.

There is a separate wooden building for isolation purposes. It contains one ward 22 feet by 22 feet with nurses room, kitchen, and toilet. This building is only used for storage. Contagious cases are sent to city hospitals. The building should be restored to its original use.

(30) Out-patient Office.

Located in the old Custom House on the second floor, corner of Third and Olive Streets, has four rooms, waiting room, office, surgical dressing room and dispensary. Furniture and floor coverings are furnished by the Custodian of the building and are adequate. A new surgical dressing table is required to replace an old one, worn out and defaced, also an instrument case and new instruments.

(31) Floor Space.

In the hospital group proper, namely; the executive building, the three pavilion wards and the covered connecting corridors, the total net floor space is as follows:

Basement (Executive Building only).....	1309	square	feet
First Floors.....	14013	"	"
Second Floor (Executive Building only).....	1638	"	"
Total.....	16960	"	"
Total hall and covered corridor space.....	2868	"	"
	19828	"	"

On this group the total net floor space for:

Hospital uses is.....	72%
Quarters (except hall space) is.....	15%
Hall space (including quarters) is.....	13%
	100%.

[illegible]

Quarters for two officers, attendants, space for subsistence purposes and storeroom are provided in old hospital building.

Summary of floor areas, old building:

Storerooms and Unused Space	10400	square feet.
Hospital Uses	2560	" "
Quarters	8200	" "
	21160	" "
Hall Space	6280	" "
Total	27440	" "

(32) Bed Capacity and Space Allowed.

The total normal bed capacity of the hospital is 73, maximum 90. On the normal basis, each patient has 1200 to 1300 square feet of floor area and about 2000 cubic feet of air space, figured on a height of 16 feet to eaves. The main wards are open to roof without ceiling.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914, and also for the period from July 1 to November 30 for the calendar years 1913 and 1914.

	Fiscal Years			July 1 to November 30	
	1909	1913	1914	1913	1914
Number days hospital relief furnished	9278	8628	8449	3177	3408
Daily average hospital patients	25.4	23.6	23.0		
Total daily cost per hospital patient	---	$2.30	$2.39		
Number of hospital patients	553	509	516		
Number of outside patients	582	559	662		
Number of times treated	771	776	978		

On December 2, there were 26 patients of whom 8 were chronics, tubercular patients one. Of the 26 patients 17 were white and 9 colored.

The maximum daily number in the hospital for the last year was 39, minimum 13. The number of days hospital relief furnished in 1914 was 2% less than in 1913 and 9% less than in 1909. For the first five months of the present fiscal year it has been 7% greater than for the same period of last year. The number of out patients has been substantially the same for the past five years.

(34) Ambulance Service.

This service is procured under contract with private parties. Cost round trip from city office $4.00. Facilities and service adequate.

(35) Heating, Power Plant & Ventilation.

A central heating and power plant is located in building No. 6, which supplies live steam to wrought iron column radiators in all buildings except Nos. 7 and 8, which are heated by stoves.

[illegible]

[illegible]

[illegible]

The plant consists of two return tubular boilers in brick settings over patented furnaces, two Worthington duplex pumps 4½ by 2-3/4 by 4 and 6 by 4 by 6, respectively, one Worthington closed heater, one 25 horsepower horizontal slide valve engine for laundry power and one horizontal slide valve engine and hoist for removal of ashes. Boilers are operated at 40 pounds steam pressure for power work, steam for radiation cut to 2 to 3 pounds through pressure reducing valve. All the above machinery in good general condition, but piping system to all radiators is in very poor condition and needs thorough overhauling, and if old hospital building use is to be extended, additional radiation will be needed.

(36) Illumination.

Illumination is by electric light through modern fixtures in the administration building and the Surgeon and Assistant Surgeons' living quarters, elsewhere by single light drops. The wards are very unsatisfactorily and inadequately lighted. Larger lights should be used with frosted bulbs, or indirect fixtures should be installed in these rooms. Elsewhere the lighting fixtures are sufficient for the present except that wiring in basement of building No. 1 is loose and unprotected by conduits and should be repaired at once.

(37) Decoration.

The wards and sick rooms are all very dark and gloomy, painting being deep red for wood trim and open rafter roof, green for sidewalls. When repainted, colors should be extremely light as the rooms are naturally dark by reason of verandas and insufficient windows.

(38) Telephone and Call System.

There is one city telephone, Kinlock independent system. There is an intercommunicating telephone of ten stations connecting executive building with outbuildings and old hospital. There is no call bell system. The headquarters of the nurse on night duty is in the pharmacist's office. An annunciator system should be provided with annunciator in pharmacist's office to call night nurse. One push button will be required for each large ward and each of the smaller rooms used as wards. There is no fixed watchman clock system, but watchman punches portable clock using keys permanently fastened to wall at stations visited. With exceptions noted facilities are adequate.

(39) Ice and Refrigerating Facilities.

Artificial ice is supplied to refrigerators daily. The quality if satisfactory and the method should be continued. The ice boxes or refrigerators, however, are inadequate for taking care of more than a daily supply of meat. If the practice of daily delivery is abandoned, a meat cooler should be installed in the room in building No. 5 now used as subsistence stores, but it appears that little or no saving would follow buying in quantities. There is no refrigerating apparatus and none is deemed necessary.

(40) Water Supply and Fire Protection.

Water is obtained from city main on Marine Avenue. Source is river water. The city has settling basins but no filter plant although one is under construction. Water is treated chemically when required. Character of water good.

In the old hospital building there are two mechanical filters which are not used except occasionally. These filters serve no useful purpose and are not required.

Water pressure 5 to 25 pounds and inadequate. There are two old underground masonry cisterns originally used for storage of water but now abandoned. When pressure is low water is pumped into tanks in attic of old hospital building. The pressure on 16-inch city main in Broadway, one block away, is also only 15 to 20 pounds from guage readings in fire engine house. There are no fire hydrants on the reservation, but there are three city fire hydrants on Marine Avenue along reservation boundary. There are no stand pipes or hose reels in any of the buildings except the old hospital building where there are two, one each on second and third floors. There are two wheel hose reels with a few lengths of 2½ inch fire hose. Reels are kept back of power house. There are nine chemical fire extinguishers, three gallon underwriter type, well distributed in the various buildings. Although the fire protection by water provided on the reservation is practically nil the insufficient pressure in the city mains makes it impossible of improvement. In case of fire dependence must be placed on chemical extinguishers and the city fire department which is close by. Six additional chemical extinguishers, three gallon underwriter type, should be provided.

(41) Fire Alarm System.

The station has a fire bell at the southwest corner of south ward which is struck by hand. City call box is located directly in front of the reservation on Marine Avenue. Facilities adequate.

(42) Sewer and Other Drainage.

Sewage and storm water is taken care of in a combined system, discharging through 10-inch terra cotta main into 15-inch city sewer in the rear of the reservation along northeast boundary. Present system adequate and in good condition.

(43) Streets, Roads, Walks, Fences and Grounds.

There is a semi-macadam road from entrance on Winnebago Street to rear of old hospital building around power house to rear of center wards, in poor condition.

A cinder road runs from the end of above to end along north side of north ward. There is a cinder path from macadam road to isolation building. The macadam road should be repaired by a renewal of top surface as recommended in inspector's report.

There is a cement sidewalk from Marine Avenue to and around old building with a branch walk of cement and brick to rear of south and center wards. A cement walk and steps lead to executive building from Marine Avenue and a brick and cement walk from this building to flag pole. There is a cement sidewalk on Marine Avenue in front of reservation. All cement walks are in good condition. Additional cement walks from boiler house to south ward and from executive building to flag pole should be provided as recommended in inspectde's report. There is a wrought-iron fence along the boundary on Marine Avenue. It is in good condition except that painting is required. No other repairs are needed. A wire fence encloses the reservation on the other boundaries. It is not exactly on boundary lines as shown on sketch of station. This fence is in poor condition and should be repaired.

The general appearance of the grounds fronting on Marine Avenue and around the main buildings is excellent. The remainder of the reservationis a natural, unused field and sufficiently well kept for the character of the surroundings.

[illegible]

(44) Wharves, Etc..
None. No waterfront.

(45) Livestock, Etc.
There is no livestock or vehicles. Miscellaneous hand tools are provided. Facilities satisfactory.

(46) Personnel.
There are on duty at this station two commissioned officers (one Surgeon and one Assistant Surgeon) and two other officers, one Interne and one Pharmacist.

There are twelve attendants classed as follows:

One Engineer;
One Cook;
Two Nurses;
One Carpenter
One Fireman;
One Night Nurse;
One Office Orderly;
One Laundryman;
One Assistant Cook;
Two hallmen.

(47) Records.
The station records seem to be properly kept with few exceptions. All clinical histories of patients are very brief and incomplete.

(48) Books.
The medical books in the station are old, and not of much use even for clinical reference.

(49) Purchase of Supplies.
Subsistence and other supplies are purchased on yearly contract, which is not very satisfactory as a good quality of meat is difficult to obtain and the price of fresh vegetables is rather high. Proposals for supplies obtained at three months' interval would increase the clerical work and have no particular advantage at this station over the yearly contract method.

APPENDIX A.

Marine Hospital at St. Louis, Mo.

Appropriation for Repairs & Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.		
10	New floor in patients' dining room	$ 200.00	X	✓
14	New cement floor for steam sterilizer room, building No. 8	100.00		no
12	Place plastered partition in dispensary to make sterilizing and etherizing room, and place door in hall partition in building No. 1, see sketch.	250.00		no
18	Remodeling nurses' room in building No. 4 to surgical dressing room	400.00		no
19	Build dark room partition in present X-Ray room building No. 4, D & M line and paint walls and ceiling in this room black, see sketch	75.00		✓
36	Repair plaster in basement of building No. 1	50.00	X	✓
37	Painting entire interior of all buildings except Nos. 7 and 8	5000.00		no
1	Place ceilings in ward rooms of buildings 2, 3, and 4	1000.00	X	✓
38	Call bells for wards	200.00		✓
40	Six chemical fire extinguishers, three gallon underwriter type	60.00		✓
43	Repairs to fences and roads and new sidewalks	900.00	X	no
		$8135.00		

[illegible]

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APPENDIX B.

Marine Hospital at St. Louis, Mo.

Appropriation for Mechanical & Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
8	Kitchen sink No. 36 BRELE	$ 50.00
9	Move attendants' bath room on first floor to room above it to make room for kitchen stores and keep attendants in their own quarters	300.00
18	Surgeon's washup sinks in new etherizing and washup room No. 36 R-2L.	150.00
18	New washup sink in surgical dressing room building No. 4, No. 28 R & L	100.00
19	Galvanized sink in new dark room building No. 4, No. 40B	50.00
21	New sink in dispensary No. 36 BRLE	50.00
25	New syphilitic toilet to sketch	800.00
36	Run exposed electric light wires in basement of building No. 1 in metal conduits	50.00
		$1550.00

APPENDIX C.

Marine Hospital at St. Louis, Mo.

New Construction.

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of Report.		ITEMS	Estimated Cost.
II	4	New site, buildings and equipment	$400.000.00
III	25	Syphilitic toilets for buildings No. 3 and 4.	1,000.00
			$401,00 .00

APPENDIX D.

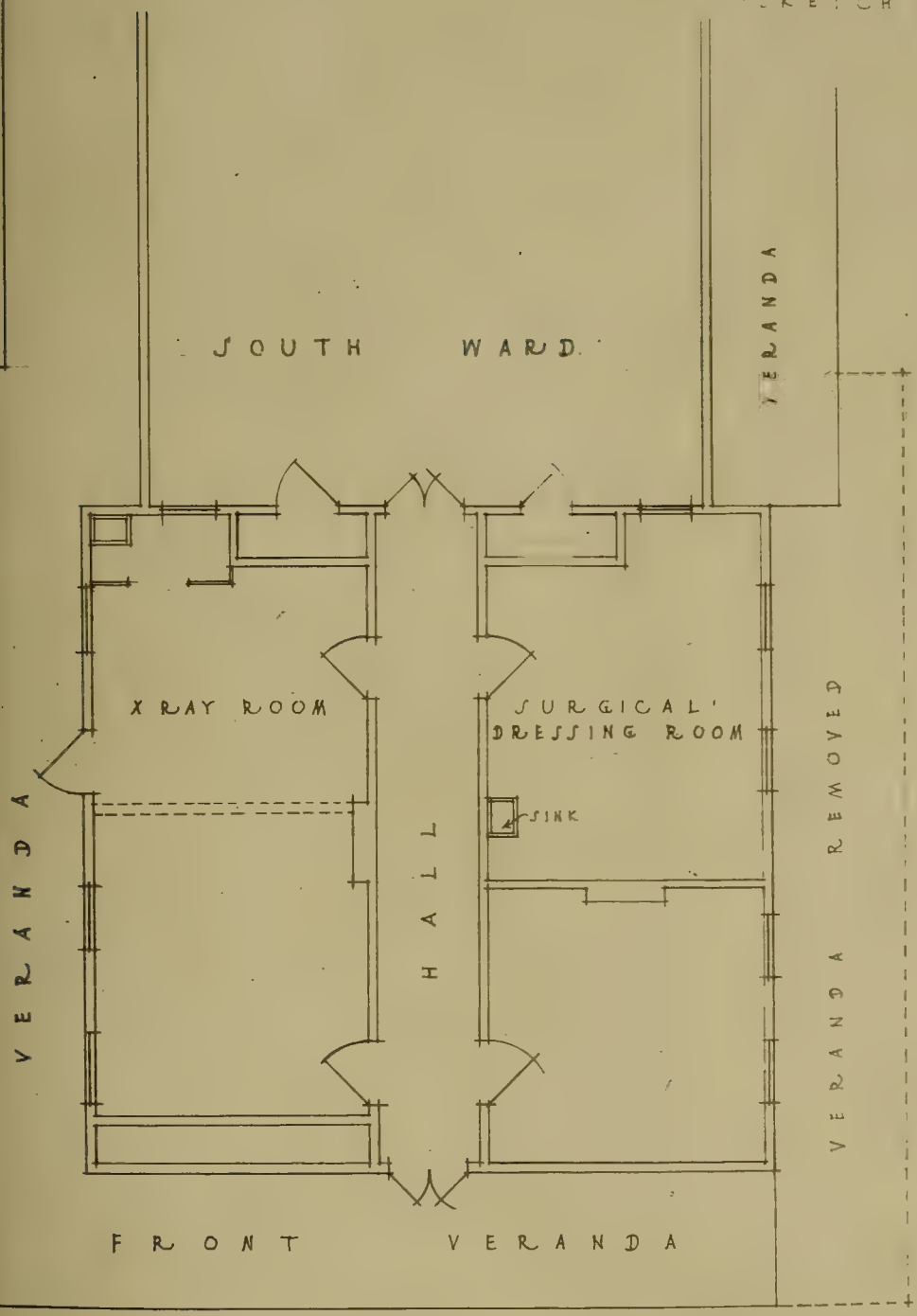
Marine Hospital at St. Louis, Mo.

Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

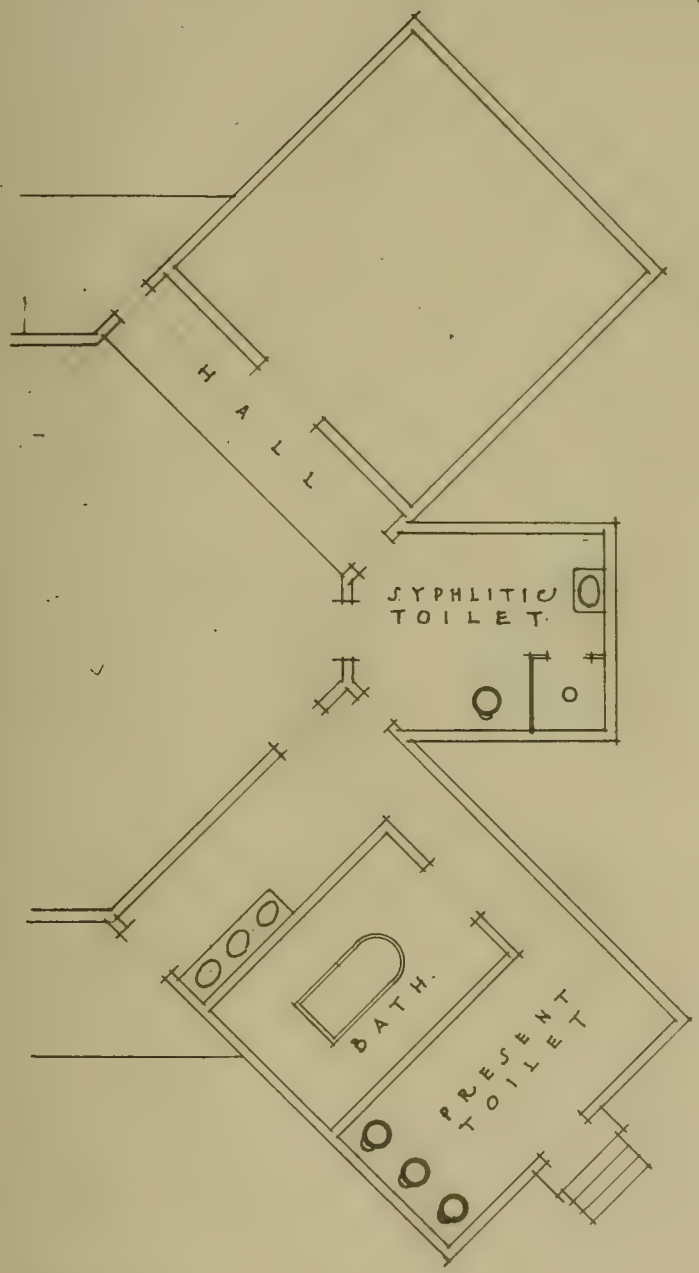
Paragraph of report	ITEMS	Estimated Cost.
30	Office (outpatients)	$ 165.00
2	Offices (hospital)	336.00
22	Wards	680.00
18	Operating and Surgical dressing room	225.00
21	Dispensary	50.00
20	Laboratory	90.00
19	X-Ray room	23.00
5	Kitchen	75.00
10	Dining room	125.00
17	Laundry	614.00
8	Officers' quarters	475.00
9	Attendants' quarters	275.00
	TOTAL	$3153.00

U·S·MARINE·HOSPITAL
·ST·LOUIS · MO·
·SCALE $\frac{1}{8}$" = 1'-0"
·TYPICAL· WARD·ROOMS
·SKETCH No 1·

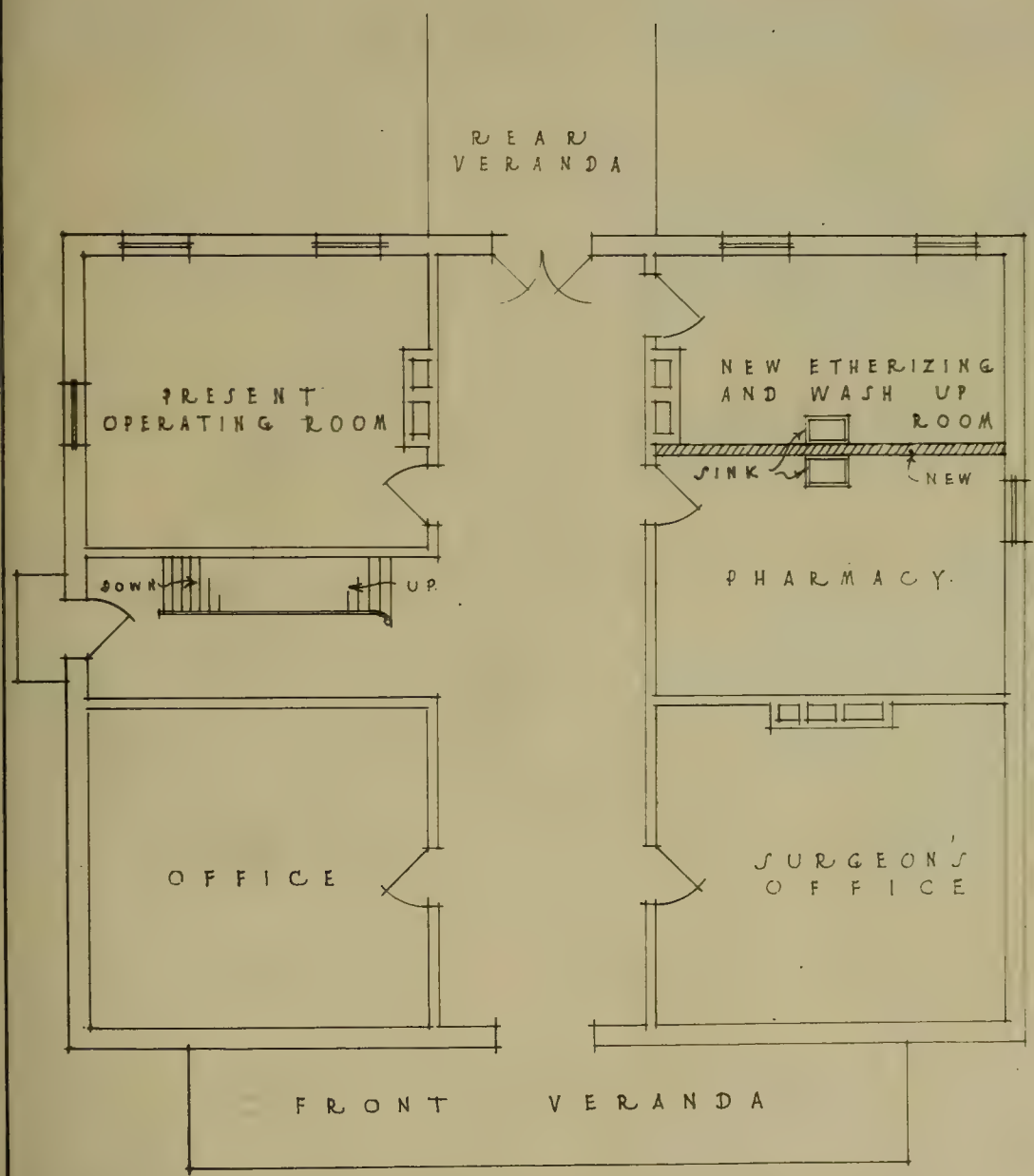



U.S. MARINE HOSPITAL.
ST. LOUIS. MO. JUNE 1914.
DRAWN BY Richard Gounley
Acting Asst. Surg. General
BASE BALL IN USE GROUNDS
2ND ST.
DE KALB ST. 60'
ALLEY 15'
GUTHRIE ST 50' VACATED
VERY DEEP GULLEY. ELEV. ABOUT 60.
KOSCIUSKO ST. 60'
CLEON ST.
MIAMI ST.
MARINE
WINNEBAGO ST.
WINNEBAGO
ALLEY
FIELD
LAWN
CINDER PATH
TO STREET CAR, 1 BLOCK.
PARKING
CONCRETE WALK 5'6" WIDE
SOUTH GATE
ST 56'
Scale 1" = 60 feet
-KEY-
LOCATION OF PRESENT FENCES
ESTABLISHED CITY GRADES.
IN RED SHOWS ELEVATION OF GROUNDS
O.P. OPEN PORCHES
CISTERNS - UNDERGROUND (2 ONLY)
FOUNTAIN (ONE ONLY)
H.P. WATER PLUG FOR 3/4" HOSE (3 ALL TOLD)
DRAINS
C.B. COVERED & ENCLOSED BRIDGES BET BLDGS
C.W. CEMENT WALKS.
B.W. BRICK WALKS (3'0" WIDE)
W.W. WOOD WALKS (3'0" ")
1. EXECUTIVE BLDG.
2. NORTH WARD.
3. CENTER WARD
4. SOUTH "
5. OFFICERS & ATTENDENTS QUARTERS (OLD BRICK BLDG)
6. BOILER H. & LAUNDRY
7. DEAD HOUSE
8. ISOLATION WARD
9. WAGON SCALE SHED.
SEWER
WATER
GAS

U·S·MARINE·HOSPITAL
ST·LOUIS · MO·
SYPHLITIC TOILETS
FOR BUILDINGS Nº 364
SCALE $\frac{1}{8}$" = 1'-0"
SKETCH Nº 3.



·U·S·MARINE·HOSPITAL·
·ST·LOUIS · MO·
·SCALE $\frac{1}{8}$" = 1'-0"
SKETCH N° 2



· VIEWS · OF · U·S·MARINE·HOSPITAL·

· ST· LOUIS · MO ·

ADMINISTRATION · B'LD'G · FRONT ·

· ADMINISTRATION · B'LDG · SIDE ·

· ADMINISTRATION · & · WARD · B'LD'GS ·

· GENERAL · VIEW · FRONT ·

· OLD · HOSPITAL · BUILDING ·

· OLD · HOSPITAL · BUILDING ·

VIEWS OF U·S·MARINE·HOSPITAL·

·ST·LOUIS·MO·

·COVERED·PASSAGES·&·VERANDAS·

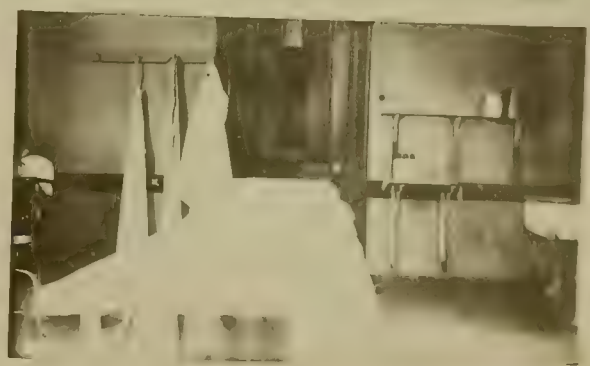
·COVERED·PASSAGES·&·VERANDAS·

·COVERED·PASSAGES·TO·DINING·R'M·

·INTERIOR·OF·PASSAGE·TO·DINING·R'M·

·WARD·ROOM·WHITE·

·WARD·ROOM·COLORED·



U·S [illegible] HOSPITAL

[illegible] SOUTH · WARD · BLDG ·

[· NORTH · & · CENTER · WARDS ·

[· ISOLATION · HOSPITAL ·

[· ISOLATION · & · STERILIZING · B'LD'G ·

[· POWER · PLANT · & · LAUNDRY ·

[· POWER · PLANT · & · YARD · VIEW ·

October 13, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at St. Louis, Mo., with the request that a bill be prepared for presentation to Congress authorizing the sale of the marine hospital reservation at this port, the proceeds of the sale to be used for the purchase of a more suitable site and the erection of a new marine hospital thereon; money received from the sale not needed for this purpose to be utilized in rehabilitating other marine hospitals or building new hospitals at stations where the present buildings are old and out of date.

I respectfully suggest that the following repairs recommended in this report be postponed until it is

ascertained what action Congress intends to take regarding the sale of the property:

Paragraph of Report	I-T-E-M-S	Estimated Cost
14	New cement floor for steam sterilizer room, building No. 8,	$ 100.00
18	Place plastered partition in dispensary to make sterilizing and etherizing room, and place door in hall partition in building No. 1, see sketch,	250.00
18	Remodeling nurses' room in building No. 4 to surgical dressing room	400.00
37	Painting entire interior of all buildings except Nos. 7 and 8	5000.00
43	Repairs to fences and roads and new sidewalks	800.00
		6550.00

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

Constitutional Well section requiring approval in order expenditure the date of the necessary:

Building Section	Description	Estimated Cost
16.	The second floor fire escape structure from room building No. 1.	[illegible]
26.	Place plastered partitions in storage for male constituents and other items, and place door in wall partition in building No. 1, see above.	[illegible]
26.	Installing lavatory room in storage for a [illegible]	[illegible]
27.	Installing entire interior of all buildings storage rooms Nos. 7 and 8	8000.00
28.	Repairs to floors and [illegible]	

Respectfully,

(Signed) Rupert Blue

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL.

at

SAN FRANCISCO, CALIFORNIA

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

H. V. MERRY,
Supervising Superintendent
of Construction, U.S. P.H.S.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

Report of inspection made March, 1915, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The United States Marine Hospital reservation at San Francisco, California, is located at the south and west part of the United States Military Reservation, known as the Presidio. It comprises about eighty-six acres of land, rolling in character and embracing a small lake (called Mountain Lake) in its center and southern border. The reservation is somewhat diamond-like in outline with truncated ends, and is bounded on the northeast and west by the rest of the military reservation and on the south by Lake Park, city lots and Lake Street. There is a small plateau on the west bank of Mountain Lake on which the buildings are placed, which is fairly level with a gentle slope to the south and east, the portion of the grounds occupied is well kept, covered with attractive sod and contain many beautiful trees, shrubs and flowers. The situation is pleasing, salubrious, well sheltered from winds, has an abundant water supply for all purposes and ready communication with the city by street cars. It is distant from the city by about 5½ miles and from the Cliff House about 1½ miles. A road to the Presidio runs through the reservation.

The buildings, consisting of a pavilion group, are located on the plateau on the west bank of Mountain Lake.

(2) History.

All records relating to service affairs and relief of sick and disabled seamen at the port of San Francisco were burned when the Custom House in that city was destroyed by fire in May, 1851; however, it is known that as early as 1849, Dr. Peter Smith had a private hospital at the corner of Clay and Powell Streets, in which patients of all classes were taken care of, including seamen. This building was destroyed by fire on October 31, 1850, and in November of that year the Adjutant General, United States Army, upon request, directed Major General E. V. Smith, in command of the Military Division of the Pacific, "to grant the use of the building known as the Presidio to the Department for temporary occupancy as a marine hospital" and on the 22d of November the Collector of Customs was directed by the Secretary of the Treasury to fit up and furnish it as a Marine Hospital.

In April, 1851, the Legislature of California passed an Act establishing a State Marine Hospital in San Francisco. This was built on Filbert Street between Stockton and Powell Streets. On September 30, 1850 Congress appropriated $50,000.00 for a Marine Hospital in San Francisco. Rincon Point was secured and the hospital was built on what is now the corner of Spear and Harrison Streets. The corner stone was laid on April 7, 1853 and the building was completed on December 15 of the same year at a cost of $231,374.10. While the hospital was under construction the Revenue Cutter bark "Polk" was used as a floating hospital for the care of seamen. This vessel while so used anchored near Fort Mason. In September, 1865, the marine hospital was damaged by an earthquake and on October 21st of the same year another earthquake shook the city and did still further damage to the building, which led to its abandonment for hospital purposes.

After its abandonment as a hospital, by resolution of Congress the building was allowed to be occupied as a sailors' home with the proviso that it revert to the Government when it ceased to be used for that purpose. It is leased to the City of San Francisco for the sum of $1.00 per year and still used as a sailors' home.

After the patients were removed from the hospital they were cared for in the Almada Park Asylum. This arrangement ceased on June 30, 1872, and the patients were housed at 224 Valencia Street under a contract with Foster and Dole of San Francisco at a rate of 50 cents per day for each patient. This arrangement continued until 1875.

About 1873 an appropriation was secured from Congress for the erection of a Pavilion Marine Hospital at Mountain Lake, Presidio, San Francisco. This building was begun in June, 1874 and completed and occupied in June, 1875 at an original cost of $73,204.06, and has been maintained by the Service since that time.

(3) Need for a Marine Hospital.

As relief for sick seamen has been given at this port by the Government since 1853 and such relief will in all probability be constantly demanded at such an important shipping center as San Francisco, liberal provision should be made for the maintenance of a well-equipped and suitable Marine Hospital at this point.

(4) Adequacy of Plant.

The present pavilion group of wooden structures has served its purpose for nearly 40 years, is in need of constant repairs, is expensive in administration and entirely inadequate for the needs of the station. The present structures should be replaced by a modern hospital plant with a capacity of 200 beds.

The estimated cost of such a plant, including hospital equipment and necessary buildings, is $600,000.00.

The immediate repairs and minor betterments needed to keep the present plant in operation pending construction ofnew buildings should however be made and are provided for under section III.

(5) Acquisition or Disposal of Land.

The present reservation contains 86 acres and forms a part of the land adjoining the army post, and should not be sold; part of it might be turned back as a useless expense in upkeep but for no other reason. The lake in front is especially valuable as a source of water supply for domestic and fire purposes.

(6) Future Development or Disposal of Plant.

The immediate construction of a new modern hospital plant of 200 bed capacity has been recommended to replace the present unsatisfactory structure. It is believed that a hospital of this capacity will meet the needs of the station for a considerable period. The proposed plant should however be laid out so that future extensions can be readily made.

II

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings (for details see appendix A)
Total estimated cost of work recommended, $ 2,415.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)
Total estimated cost of work recommended, 4,335.00

(3) Legislative Appropriation for New Construction (for details see appendix C)
Total estimated cost of work recommended, 600,000.00

(4) Appropriations for Administrative Equipment (for details see appendix D)
Total estimated cost of items recommended, 1,571.00

T O T A L..... $608,371.00

NOTE:- If recommendations under section I, paragraph 4, are adopted, items 16 and 28, Appendix A, should be omitted.

(5) Personnel.
Adequate.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

No. 1, Surgeon's Residence, now wood frame, cottage type, clapboard first story, creosoted shingles second story, shingle roof, brick foundation, basement under rear portion, contains laundry and has cement floor; all first floor rooms except kitchen have quartered oak veneer floor; all other floors S D & M hard pine, wood base and trim, plastered walls and ceilings; one attic room wired for electric light, piped for gas; condition good but dining room and parlor are very small and should be enlarged by a one-story extension with balcony over. Steam heat, gas and electric light. Floor area 3,430 square feet.

No. 2, Surgeon's Old Residence, one story frame, clapboard exterior, shingle roof, standard trim and finish pine painted, S D & M hard pine, painted, plastered walls and ceilings all in good repair, shingle roof, brick foundation, no basement, wired for electricity, piped for gas, steam heat, gas and electric light. Floor area 2,940 square feet.

No. 3, Assistant Surgeon's Residence, two apartments, frame construction, one story clapboard exterior, shingle roof, brick foundation, no basement, pine base and trim painted, plastered walls and ceilings painted, S D & M hard pine floors painted - all in good condition, wired for electricity, piped for gas, steam heat, gas and electric light. Floor area 2,280 square feet.

No. 4, Executive Building, two-story and basement, wood frame, clapboard exterior, shingle roof, maple floor first story, except toilet which is tile floor and base, second story S D & M hard pine floors painted; all base

and trim pine. Painted walls and ceilings, lath and plaster, painted, basement has cement floor, no finish, brick foundation, condition good throughout. Steam heat, gas and electric light. Floor area 6,900 square feet.

No. 5, Hospital Dining Rooms and Kitchen, one-story, wood frame on brick foundation, clapboard exterior, shingle roof, plaster walls and ceilings and wood trim pine, all interior work painted. Kitchen has new 2" rift floor. All other rooms 3" D & M floors. Steam heat, gas and electric light. Floor area 2,400 square feet.

No. 6, Blacksmith Shop and Necropsy, one story, wood frame on brick foundation, clapboard exterior, shingle roof, unfinished interior in all rooms, whitewashed. Necropsy room unfit for use. No heat, electric light. Floor area 840 square feet.

No. 7, Attendants' (old) Quarters, two-story frame on brick foundation, clapboard exterior, shingle roof. Plastered sidewalls, D & M partitions and ceilings, 3" D & M floors, all in poor condition, should have new building as recommended by Supervising Superintendent Roberts, July 8, 1914. Steam heat, gas and electric light. Floor area 1,334 square feet.

No. 8, Attendants' (new) Quarters, One and one-half story wood frame, brick foundation, stucco on metal lath, with creosoted shingle above window line, 3" D & M floors, plastered walls and ceilings, pine base and trim, stained and varnished; all in good order. Plaster work painted except in two upstairs bed rooms, which should be painted. Steam heat, gas and electric light. Floor area 1,968 square feet.

No. 9, Ward D, one-story wood frame, on brick foundation with one basement room, clapboard exterior, shingle roof. Toilet rooms have marble tile floor, base and wainscot. Main ward room has plastered walls and open truss roof; all other rooms have plaster walls and ceilings, painted, pine base and trim, painted. Floors 3" D & M pine. Ward rooms should have compo board ceilings painted. Steam heat, gas and electric light. Floor area 5,100 square feet.

No. 10, Ward A, one-story, basement under rear portion, wood frame on brick foundation, clapboard exterior, plastered walls and ceilings throughout, standard baseboard and pine trim, ward room has 2" rift floor, needs resurfacing and wax. Toilet room have tile floor and base, plaster above painted; all o other floors 3" D & M painted; generally in good condition. Steam heat, gas and electric light. Floor area 7,[illegible] square feet.

No. 11, Ward B, one-story wood frame on brick foundation, clapboard exterior, shingle roof, plaster walls and ceilings throughout, except one D & M partition between X-Ray and laboratory rooms. Toilet rooms have porcelain tile floor and base; all other floors D & M hard pine, pine base and trim painted, steam heat, gas and electric light. Floor area 5,194 square feet.

No. 12, Ward C, one-story wood frame on brick foundation, clapboard exterior, shingle roof. Toilet rooms have porcelain tile floors and base. Operating room and surgical dressing rooms have porcelain tile floor and base. All other floors are D & M hard pine. Plaster walls and ceilings throughout painted, pine base and trim painted. Steam heat, gas and electric light. Floor area 5,194 square feet.

No. 13, Isolation Ward, one-story wood frame, clapboard exterior, no interior trim, 3" D & M floor, interior rough frame whitewashed. Building should be discontinued. Steam heat, electric light. Floor area 128 square feet.

No. 14, Assistant Pharmacist's and Clerk's Quarters, one-story frame on brick piers, D & M board exterior, open frame, shingled roof, no interior trim or finish, 3" D & M floor, one room and bath, painted interior. This building was built for an isolation building and should be used as such. Steam heat, gas and electric light. Floor area 280 square feet.

No. 15, Steam Sterilizer Building, one-story wood frame on concrete base, clapboard exterior, shingle roof with Monitor ventilator. Concrete floor, D & M sheathed side walls, open rafter ceiling, no interior finish, painted inside. Steam heat, electric light. Floor area 420 square feet.

No. 16, Boiler House and Laundry, two-story brick with tin roof, cement floor in boiler room and pump pit, 2" rift hard pine floor in laundry wash room, 3" D & M floors elsewhere, all in good condition. Boiler room plastered on brick for side walls, lath and plaster ceiling, no base or wood trim. Elsewhere in building 10-inch pine base, wood trim, plastered walls and ceilings. Steam heat, electric light. Floor area 2,640 square feet.

No. 17, Stable, one-story and loft, wood frame on concrete base. Clapboard exterior, shingle roof, cement floor at ground level, plank floor for loft, open framed. No interior finish, wood stalls of four horse capacity, whitewashed interior, paint outside, good general condition. No heat, electric light. Floor area 4,480 square feet.

No. 18, Pump House (at lake), one-story shed, clapboard exterior, shingle roof, 6-inch D & M floor, no interior trim, unpainted interior, painted exterior, fair condition. No heat, electric light. Floor area 1,84[illegible] square feet.

No. 19, Greenhouse, brick base to window sills, glass above. Brick paved floor, wood frame for glass sides and roof. Good condition. No heat, no light. Floor area 135 square feet.

No. 20, Tool House, wood frame one-story shed, shingled sides and roof, 3" D & M floor, no interior trim, good condition, no interior paint, creosote exterior. No heat, no light. Floor area 85 square feet.

No. 21, Fire Hose Shed, one-story frame shed, no interior trim or paint, shingle roof, board floor painted outside only. No heat, no light. Floor area 30 square feet.

No. 22, One Story Pump Shed, Abandoned, shingle roof, clapboard exterior, no interior trim, sheathed with odds and ends inside; should be removed. No heat, no light. Floor area 200 square feet.

(2) Offices.

Surgeon's Office.

Located on the north side of the first floor of the executive building, is a large room with high ceiling fairly lighted, sufficiently furnished and

suitable for office purposes.

Pharmacist's Office.

Consists of one medium-sized room in the southwest corner of the first floor of the executive building. It is somewhat crowded as three people work in this room (pharmacist and two assistants) and not well lighted for night work. A central chandelier and two filing cabinets are required.

(3) Visitors' Reception Room.

One large room located opposite the Surgeon's office on the first floor of the executive building. It is well lighted and suitable for the purpose. The clinical histories and some of the other records are kept in this room. A rug should be furnished for this room; otherwise the furniture is sufficient.

(4) Examining Room.

There is no room for this purpose. Clinical and physical examinations are made in the out-patient office, pharmacy, surgical dressing rooms and the wards. Such a room is badly needed but there is no space available until additional buildings are constructed.

(5) Kitchen and Dish Kitchen.

The hospital kitchen is located in a one-story frame building to the south of and next to the executive building. It is a good-sized room and well furnished. A new electric bread cutter and a steam cooker are needed. Copper lined sinks are features in this kitchen, and in the dish-washing pantry.

(6) Pantry and Food Storage.

A room for the refrigerator, meats and vegetables and subsistence stores, adjoins the kitchen, and there is a special compartment with an opening into the hallway between the kitchen and dining room for the storage of milk and eggs. These rooms are conveniently located and sufficient for present needs.

Pantry. A small pantry adjoins the dining room, has a copper lined sink for dish washing and a dish cabinet.

(7) Store Rooms.

In the basement ofthe executive building are rooms for the storage of linen, hospital supplies, medical stores and glassware. The room in which the linen is stored should be provided with cupboards or lockers to protect the linen, etc., from dust.

Rooms for general storage, furniture and miscellaneous articles, paints, oils and patients' clothing are located under ward D. Lumber is stored under ward A, and unserviceable property is stored in a shed at the rear of the stable building. A subsistence storeroom adjoins the kitchen.

(8) Quarters for Officers.

Surgeon in Charge.

A two-story, attic and basement, frame building at the north side of the reservation is used for quarters for this officer. The entrance faces the north/on the first floor there is a conservatory or sun room, a library, sitting room, hall, dining room, butlers' pantry, kitchen, pantry and servants' room. The servants' room has a separate bath and toilet. On the upper floor there are four bedrooms, a small dressing room and bath and toilet room. In the basement there is a hand laundry and storage room.

These rooms are comfortably furnished, heated by steam and grates and lighted by electricity. New chandeliers are needed for the conservatory, sitting room, dining room, library and hall, and some of the rooms need new paper on the walls.

Surgeon's Quarters (Old Cottage).

This is used by the officer next in rank to the Surgeon in Charge. It is located to the south of and next to the cottage of the latter officer, is a one-story frame building. It has a parlor, dining room, three bedrooms, a hall, small bedroom on the side of the front porch, bath room, kitchen, small store room and servants' bed room and toilet. The parlor is a large room and the dining room of fair size; the bed rooms are small. This building is heated by steam and fireplaces, lighted by electricity and is comfortably furnished. A single brass bed with mattress and a kitchen cabinet are desired.

Junior Officers' or Assistant Surgeons' Quarters.

These consist of two sets of quarters in a one-story frame building placed between the executive building and the old surgeons' cottage. The set of quarters in the east end of the building consist of a parlor, dining room, hall, two bed rooms, a small storeroom, servants' room, bath room, pantry and kitchen. The set in the west end of the building has a sitting room, hall, dining room, two bed rooms, bath room and kitchen. New table dishes are needed for the first set of quarters and a hall rug for the second set named. Equipment otherwise adequate.

Internes' Quarters.

These consist of one room in the northeast end of Ward "A" and one small room in the pharmacist's quarters on the second floor of the executive building. The Internes, of which there are two on this station, were formerly quartered in a large room in the northwest end of the first floor of the executive building with an adjoining bath room. This room, by order of the Bureau, is reserved for the use of officers of the Coast Guard Service. The present quarters for Internes are not very suitable, and provision should be made for their better accommodation. This could be done by the construction of a separate building in which quarters could be provided for Coast Guard Officers, Internes and female nurses.

Pharmacist's Quarters.

These are located on the upper floor of the executive building and consist of four large rooms, sitting room, two bed rooms, kitchen and bath room and pantry. One room belonging to these quarters is occupied as Internes' quarters. The equipment of the pharmacist's quarters is adequate for present needs.

Female Nurses.

Two female nurses on this station are quartered in one large room in the southeast end of Ward "A" and a small bath room adjoining it has been made by partitioning off a portion of the room. This room wasformerly used for Coast Guard Officers until the arrival of female nurses. It is sufficient to accommodate two nurses and nothing is needed in the way of equipment.

(9) Quarters for Attendants.

The attendants are quartered in a new two-story stucco building located to the south of Ward B; three on the first floor and seven on the second. This building has a large entrance or hall room on the first story and a spacious lobby on the second floor.

Other attendants' quarters are located in a small one-story and basement frame building situated to the southeast of the kitchen and dining room building. Six attendants are quartered on the lower floor or basement and there are rooms for six more on the first or upper floor. Three attendants are quartered on the upper floor of the laundry building. One each in the room in the northeast corner of Wards "B" and "C" and two in a small one-story two-room frame building situated to the southwest of Ward "D", originally built for necropsy house. One attendant, the first cook, does not sleep on the reservation, but goes to his home at night.

All of the above named attendants' quarters are comfortably furnished and require no new equipment at present.

Owing to the scattered way in which the attendants at this station are housed it would be desirable to concentrate their quarters in one building by erecting a new building, and provision could be made in this for proper Interns' and female nurses' quarters and rooms for officers of the Coast Guard and other services. The old buildings vacated, if this were done, could be used for other purposes.

(10) Patients' Dining Room.
This is located in the kitchen and dining room building to the south of the executive building and is a fair-sized room, well lighted and convenient to the kitchen. It is adequately furnished and has excellent tables and chairs of superior construction.

(11) Officers' and Interns' Dining Room.
Two small rooms at the west end of the kitchen building and next to the general dining room are used, one for the interns and one for the two female nurses on duty here. They are sufficiently equipped with the exception of table linen.

(12) Attendants' Dining Room.
There is no separate room for this purpose. The attendants take their meals in the general dining room at separate tables and at different hours from the patients.

(13) Recreation and Smoking Room.
There are smoking rooms at the south end of Wards "B" and "C". The smoking room at the same end of Ward "A" has been transformed into an X-Ray room and the one to the south of the rotunda in Ward "D" is used as a tubercle ward.

(14) Disinfecting Facilities.
Located in building No. 15, there is a Kinyoun Francis Steam Sterilizer, operated ends and with formalin ammonia attachment, in good condition and satisfactory for prospective needs.

In operating suite of building No. 12, there is a Hay Sprague Water Sterilizer, a Hay Scherer Dressing Sterilizer and a wheeil sterilizer of the same make. An instrument sterilizer should be added to this equipment.

In the surgical dressing room there is one Hay Scherer Instrument Sterilizer.

(15) Incinerators.

There are none. Bandages are burned in a small brick fire pot in the yard, called a crematory. A coal-burning water-jacketed incinerator should be installed.

(16) Disposal of Soiled Linen.

Soiled linen is removed from the wards and rooms and stores in station made screened boxes placed in the old heater rooms at the ends of the pavilion wards, and from thence it is made into bundles and carried to the laundry. Infected linen is soaked over night in carbolic solution and then boiled at the laundry. Infected bedding and clothing is sterilized by steam in the Kinyoun Francis sterilizer when necessary.

(17) Laundry Facilities.

Laundry is located in building No. 16 and consists of two Troy Laundry Machine Company's washers; one Troy centrifugal dryer; one 108 single roll mangle; one copper starch cooker; one earthenware tub; one 13-track steam dry room; one 3-iron gas range for hand irons; two ironing tables; machinery operated by steam engine belted to overhead shafting to machines; one hand power elevator connects to ironing and mangle room up stairs; machinery in fair condition, needs no additions at this time.

(18) Operating and Surgical Dressing Room Facilities.

Operating room, a small, poorly lighted room located on the east end of Ward "C". Adjoining it is a sterilizing and wash up room fitted with water, dressing and utensil sterilizers but no instrument sterilizer. The Surgeon in charge makes the suggestion that, as the surgical unit at this station is inadequate, a new one be constructed between Ward "C", the surgical ward, and Ward "B", in which provision could be made for the operating room, sterilizing room, anesthetizing room and lavatory and toilet for the medical officers, which seems reasonable and is recommended.

If the present outfit is continued a new instrument sterilizer is needed for the sterilizing room.

Surgical Dressing Room.

There is a surgical dressing room in the east end of Ward "C" across the entrance hall from the surgical operating room, and one in the east end of Ward "B" across the hall from the laboratory which is used for dressing venereal cases. Both of these rooms are plainly furnished and need new instrument sterilizers, dressing cases, instrument cases and dressing tables.

(19) X-Ray Facilities.

One small room with an adjoining dark room is used for this purpose. It is located in the old smoking room at the end of Ward "A" and has a fair equipment which is adequate for the needs of the station.

The room is rather small for X-Ray purposes and if a new building is provided for the attendants a better place for the X-Ray outfit could be found in some of the rooms vacated.

(20) Laboratory.

This is located in a large room in the southeast corner of Ward "B" and has sufficient equipment for ordinary clinical work. Wassermann's and special work for the hospital are done at the Federal Service in the City of San

San Francisco.

(21) Dispensary.

This consists of one large room located on the south side of the first floor of the executive building. It has a fair equipment for working purposes. A new Tennessee marble top for the dispensary counter and a new dispensary sink are needed.

(22) Wards for Women.

There are four ward buildings of one story wood pavilion style open on both sides without verandas. All wards have ceilings except D which is open to rafters. Ward buildings Nos. 10, 11 and 12 are identical in construction and each have main ward 125 feet long by 28 feet wide. Ward building No. 9 (Ward D) is in the shape of a cross and has four wards, one, and sometimes two of which are used for tubercular patients and other chronics. In the east of ward building No. 11 (Ward B) there is a small room which is utilized as a private ward.

(23) Quiet Wards.

There is only one small room available for this purpose in the east end of ward building No. 10. Additional rooms are needed.

(24) Wards for Revenue Cutter Officers.

Such officers are temporarily quartered in a room on the first floor of the executive building originally intended for sick officers in the east end of ward building No. 10, (Ward A), is now used as quarters for female nurses - present arrangement not satisfactory.

(25) Toilet Facilities.

Toilet facilities are advantageously located throughout the building and are adequate and generally satisfactory; the three sets of six gang lavatories in Wards A, B and C need refastening and a new enamel iron sink is needed in the laboratory. The toilet rooms in Ward D are poorly arranged. The sitz bath tub should be removed, the lavatory and tub should be relocated, and one closet changed from the south toilet to the north, and a urinal installed, the window made larger and two doors connecting directly to wards be made. The south ward should have doors and windows changed to match north toilet and a tub and urinal added to the equipment for this toilet, which should be assigned to tubercular patients in south ward of this building, as indicated on sketch A.

(26) Portable Tubs.

There is one portable tub without rack on the station. There are few cases of typhoid treated here and the hydrotherapeutic treatment is not much in demand.

(27) Padded Cells.

No special room for the treatment of violent alcoholic and insane patients and no restraint sheet. There is an old humane restraint apparatus on hand. Insane cases and violent alcoholics are sent to the Detention Hospital in the city, and if necessary removed from there to one of the state insane asylums.

(28) Mortuary Facilities.

Present mortuary room is an unfinished shed in one end of building No. 6, has rough board interior, whitewashed, and is unfit for use; a new building should be erected for this purpose where the present isolation shed stands. This isolation shed should be removed as unfit for use.

(29) Isolation Facilities.

The only facilities available is an old wooden building, 8 feet by 16 feet with two beds. It is inadequate and improved facilities are required. A four-room 8-bed capacity building is recommended. Smallpox and other contagious cases are sent to city institutions.

(30) Out-Patient Office.

This is located in the southwest corner of the first floor of the old Appraiser's building, corner of Washington and Sansome Streets, San Francisco, and consists of two rooms and a hall. It is sufficiently furnished, but a new wash-up sink and hot water are needed for the room used as a surgical dressing room and a few new surgical instruments are required.

(31) Floor Space.

The total net floor space of the various buildings is as follows:

	Hospital Uses (square feet)	Quarters (square feet)	Total (square feet)
Officers' quarters, Buildings Nos. 1, 2, & 3.		3650	3650
Attendants' quarters, Buildings Nos. 7 & 8.		3302	3302
Assistant Pharmacist and Clerk's quarters, Building No. 14.		230	230
Executive Building, Building No. 4.	3016	1296	4300
Kitchen Building, Building No. 5.	2400	—	2400
Ward Buildings, Nos. 9, 10, 11, 12 and 13.	22306	1208	23514
Boiler House and Laundry, Building No. 16.	2640		2640
Miscellaneous Buildings Nos. 6, 15, 17, 18, 19, 20 and 21.	3633		3633
	35995	15236	51314

Of the total net floor space in all buildings 30 per cent. is utilized as quarters and 70 per cent. for hospital purposes.

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital is 130 beds, maximum 150. On a normal basis each patient has approximately 100 square feet of floor space and 1600 cubic feet of air space. Ceilings are 16 feet. There is no ceiling in Ward building, but height to eaves is the same, 16 feet.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913 and 1914 and for the first eight months of the fiscal years 1915 and 1914.

	Fiscal Years			First 8 months, Fiscal years.		Fi ye
	1909	1913	1914	1915	1914	19
Number days hospital relief furnished	52,254	35,980	32,046	18,996	22,863	28.8
Daily average hospital patients	143	98.3	87.8			79
Total daily cost per hospital patient	—	$1.45	$1.53			1.7
Number of hospital patients	1378	1257	1276			123
Number of outside patient	1889	2164	1797			223
Number of times treated, office	2672	4494	4130			524

On March 29, 1915, there were 77 patients in the hospital of whom 10 were chronics and 10 tubercular. The maximum daily number in the hospital during the past five years was 190 in October, 1909, minimum 45 in July, 1914. The number of days hospital relief furnished in 1914 was 11% less than in 1913 and 39% less than in 1909. For the first 8 months of the present fiscal year it has been 17% less than for the same period in the fiscal year 1914.

Included in the number of days hospital relief furnished are 9 to 10 insane patients who are cared for at state or county institutions.

(34) Ambulance Service.

The station has one two-horse ambulance which is rarely used on account of the distance to waterfront, 10 miles round trip. Nearly all of the service is furnished by automobile ambulance under contract at $3.50 per trip in the day time and $5.00 per trip at night. Facilities are adequate and service satisfactory.

(35) Heating, Power Plant and Ventilation.

A central heating plant consisting of a battery of three return tubular boilers in standard brick settings, with fuel oil burners supplies low steam pressure through a reducing valve to all buildings requiring heat. Wrought iron column radiators adequately heats all buildings. Boilers operate at sixty pounds pressure and are old and possibly unsafe. New boiler plant has been requested. It is believed that 100-horsepower water tube boilers would be a good investment; the boilers supply steam to operate steam engine for laundry, fire pump boiler, feed pump and oil fuel pumps. One 4-horsepower gasoline engine belt connected to a 4 By 6 triplex geared pump, pumps water from a lake to fire and service tanks on the hill. Laundry engine is a straight line, horizontal piston valve engine, old but in good condition; all pumps except the oil feed pumps are in good order. These need new rods in both piston and valves. The valves and piping to hall radiator in Ward D should be changed to come in center of circular radiator with extension valve stems.

(36) Illumination.

Illumination is electric light, by 110 volt alternating current service, in steel conduits and is new and adequate. All the buildings are piped for gas which was formerly the only illumination, and is still used for emergency in a few fixtures, and generally for cooking and sterilizing instruments. The equipment is satisfactory.

(37) Decoration.

All buildings are attractively painted, but no defined scheme has been followed and none is advised in the present station at this time.

(38) Telephone and Call Systems.

Station has one direct connected city telephone with one extension, Bell system. There is an intercommunicating telephone system of 20 stations in good condition connecting the various buildings. A portable watchman's clock system of seven stations is also provided. An electric watchman's clock system with clock in office is desired by the Surgeon, so arranged that a separate record may be kept of the night nurses as well as the watchman. It is not believed necessary. Another portable clock could be provided for night nurses which would serve the same purpose and at nominal expense.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant and none is needed under present conditions. Artificial ice is supplied to refrigerators, as needed, which is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from two sources, Mountain Lake fed by springs and situated within the reservation directly in front of the hospital group of buildings, and from the city water supply. Storage is provided in two wooden tanks of approximately 32,000 and 50,000 gallon capacity on the hill back of the Surgeon's quarters; the larger tank is used for lake water and the other for city water. Water from the lake is pumped into tank by triplex geared pump belt connected to gasoline engine. The city pressure is sufficient to deliver water into tank without pumping. Until three years ago a suitable supply for drinking was obtained from springs on the shore of the lake and pumped to tank now utilized for city water. The possible contamination of this supply and its shortage in the dry season made advisable the change to city water for domestic purposes. Lake water is used for fire protection, sprinkling lawns and all purposes except

drinking, in the ward buildings and attendants' quarters. Water for the other buildings is taken from the city supply. There are three systems of water piping, one from the city water tank for domestic purposes in certain buildings with two-inch mains, one from lake water tank for domestic purposes to certain buildings, lawn sprinkling, etc., with 2-inch mains, and a second line with 4-inch main from the same tank to fire hydrants and fire pump. Before the installation of the latter fire line two inch hose connections on the domestic pipe line from lake tank were used for fire protection. These are now abandoned for this purpose but are still utilized for lawn sprinkling. The tank pressure on both systems is approximately 30 pounds. Pressure for fire purposes can be raised to between 75 and 110 pounds by duplex steam pump in power house.

City water supply is taken from 8-inch main in Lake Street through 2-inch connection a distance of 880 feet to valve at building No. 6. Meter is located on this line at 14th Street entrance to reservation. The city water supply is obtained from Spring Valley Water Company, a private corporation, and is of excellent quality and ample in quantity. The pressure is sufficient for domestic purposes without the use of tank on reservation. The quality of Mountain Lake supply is satisfactory for the purposes for which it is used and the supply is ample. The cost of city water is high varying from $3.50 to $1.20 per 1000 cubic feet. Under present conditions the hospital uses 14,000 to 35,000 cubic feet per month, at a average cost of $2.28 to $2.46 per 1000 cubic feet. There are ten one-way 2-inch fire hydrants well distributed about the grounds but no hose reels in buildings. The station is provided with two wheel hose reels, one in the rear of the Surgeon's quarters with 150 feet of 2½-inch rubber-lined fire hose and one at power house with 50 feet of hose. One hundred feet of additional fire hose is kept on rack on outside of both the kitchen building and executive building and there is 100 feet in store, making a total of 500 feet of 2½-inch fire hose. The nearest city fire hydrants are on Lake Street where there are two 1000 feet from the executive building. City fire engine house is ½ mile away. There are twelve fire extinguishers. The facilities provided are in good condition but certain improvements should be made as follows:

(a) A 4-inch bypass should be installed between suction and discharge of fire pumps. At present direct pressure on hydrants is through pump cylinders so that if pump were under repair the supply to fire hydrants would be cut off.

(b) Install a 4-inch supply main from 8-inch city main in Lake Street in place of present 2-inch main and connect to suction of fire pump with bypass to station fire mains so that pump can draw water either from tank on hill or from city mains and either direct city or tank pressure may be utilized. Under present conditions if the tank supply is low from failure of gasoline pump on lake shore or other reasons the station might be without water in case of fire.

(c) Disconnect tank now used for city water and connect piping system direct to new 4-inch main. City pressure is sufficient and tank if not needed. Connect tank to the two lake water piping systems. This will increase storage for lake water from 50,000 gallons to 84,000 gallons.

5

(41) Fire Alarm System.

The station is provided with an electric fire alarm system of four stations, each station consisting of a 6-inch gong and an alarm box, the signal of the station being given on all bells when the glass of the box is broken. The system is operated by dry batteries, requiring renewal. City fire-alarm box is on Lake Street 1000 feet from executive building. Facilities adequate.

(42) Sewer and Other Drainage

Sewage is discharged through terra cotta main, said to be 6-inch or 8-inch, into city sewer in Lake Street. Storm water from some of the buildings is discharged into sewer and from others onto the ground. Facilities are in good condition and adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

At present all traffic on 15th Avenue Boulevard and Presidio is over a narrow driveway through the hospital grounds directly in front of the executive building and quarters. The automobile traffic is at times heavy and the narrow roadway renders its use for this purpose objectionable and even dangerous. Funds are, however, available, and work is now under way on the completion of the broadway along the lake shore at the foot of the hill on which the buildings are located which will take the traffic away from the immediate vicinity of the buildings. Placing of this road in commission will remedy the objectionable features of the present traffic. The hospital is well supplied with macadam roadways to the front and rear of the buildings. They are in good condition and adequate. Adequate cement walks in good condition connect the various buildings. When the extension of the boulevard now under construction is completed the cement walk leading to it from the executive building should be extended to the point where the boulevard enters the grounds.

Cement curbs are needed to protect the grass plots along the driveway to the executive building from the entrance at 15th Avenue Boulevard on both sides from the reservation boundary to building No. 6.

The reservation, except that portion forming a part of the Presidio golf links is enclosed by a wood post and bar fence in fair condition. Considerable minor repairs are necessary to replace boards, straighten up parts that are out of line, etc. The fence should be put in proper condition. There is a wooden picket fence about the stable in good condition. A new pipe, post and rail fence is needed along the top of the bank north of the Surgeon's quarters, building No. 1, and along the road in front of building No. 2. It can be installed by the station force. Repairs to roadway are made from time to time by the station force and suitable broken stone should be provided for this purpose.

(44) Wharves, Etc.

None; no waterfront.

(45) Livestock, Etc.

The station has two horses, 15 and 18 years old, in poor condition. There is one two-horse ambulance in good condition and one two-horse wagon in poor condition. Two new horses and a new express wagon are needed.

(46) Personnel.

There is on duty at this station four commissioned officers, namely; two surgeons, two assistant surgeons, one pharmacist, two interns, and thirty-three attendants classed as follows: - Two female nurses, one engineer, one clerk, three cooks, one carpenter, one acting assistant pharmacist, two firemen, four oilmen, five male nurses (three day and two night), one driver, two laundrymen, one painter, one night watchman, one city messenger, three orderlies, one executive messenger, one janitor and two waiters. This force is sufficient for the needs of the station.

(47) Records.

The records including the clinical histories are properly kept and in good order.

(48) Books.

There are quite a number of modern medical books and a good many old ones in the station library and the usual service literature.

(49) Purchase of Supplies.

Subsistence, fuel and miscellaneous supplies are purchased under yearly contracts obtained in the usual manner. Gas, water, electric light and telephone service are furnished on yearly accepted proposals. Proposals obtained at three month intervals for subsistence and other sup lies would have no particular advantage at this station which is some distance from the city business center and the same may be said relative to purchase of supplies in open market.

APPENDIX A.

Marine Hospital at San Francisco, Cal.

Appropriation for Repairs and Preservation of Public Buildings.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
1	Painting two rooms in building No. 8	$ 60.00
1	Compo board ceilings in three ward rooms	2000.00
8	Paint plaster walls when needed in two rooms of building No. 1	50.00
25	Refastening lavatories in toilet rooms	5.00
25	Changes in toilet rooms of building No. 9 to sketch A.	300.00
		$2,415.00

APPENDIX B.

Marine Hospital at San Francisco, Cal.

Appropriation for Mechanical and Electrical Equipment.

REPAIRS mentioned hereunder are inthe order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated Cost.
25	New enamel iron sink in laboratory No. 26 R-2-L	$ 75.00
25	Changes in toilet fixtures in building No. 9	300.00
35	Two new boilers complete and connected to present steam lines	4000.00
35	Change radiator piping and valves to circular radiator in hall of building No. 9	10.00
		$4,385.00

APPENDIX C.

Marine Hospital at San Francisco, Cal.

New Construction.

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of Report.	ITEMS	Estimated Cost.
23	New necropsy building	$ 1,200.00
1	New attendants' quarters building	18,000.00
18	New operating suite building	3,500.00
29	New isolation building	5,000.00
4	New hospital plant	572,300.00
		$ 600,000.00

APPENDIX D.

Marine Hospital at San Francisco, Cal.

Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of Report.	ITEMS	Estimated Cost.
30	Office (outpatient)	$ 25.00
2	Offices (hospital)	400.00
22	Wards	340.00
13	Operating and surgical dressing rooms	546.00
8	Kitchen	95.00
6	Quarters for officers	75.00
9	Quarters for attendants	15.00
11	Internes' and officers' dining room	15.00
8	Chandelier for Surgeon's residence	20.00
2	Chandelier for pharmacist's office	40.00
	TOTAL.....	$1571.00

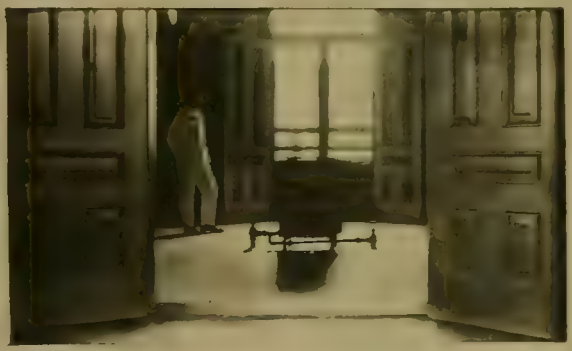
U·S·MARINE·HOSPITAL·

SAN FRANCISCO CALIFORNIA

LABORATORY

WARD C TOILET ROOM

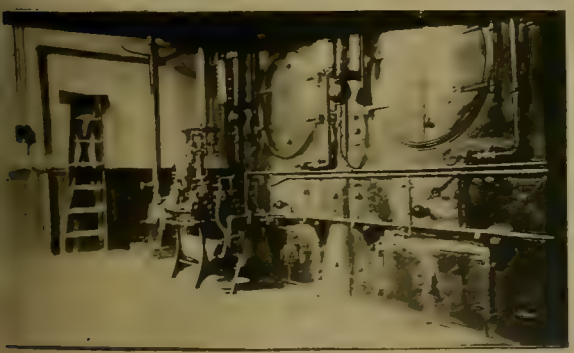
WARD D TOILET ROOM



HALL RADIATOR WARD D

WASHERS IN LAUNDRY

MANGLE IN LAUNDRY



BOILERS & OIL BURNERS

U·S·MARINE·HOSPITAL·

SAN FRANCISCO CALIFORNIA

GENERAL VIEW

VIEW FROM LAKE

EXECUTIVE BUILDING

ASSISTANT SURGEON'S RESIDENCE

WARD C & GENERAL DINING ROOM

WARD B & ISOLATION WARD

HOSPITAL KITCHEN & DINING ROOM

REAR OF WARDS B & C

U.S. MARINE HOSPITAL

SAN FRANCISCO CALIFORNIA

SURGEON'S RESIDENCE (NEW)

ASSISTANT SURGEON'S RESIDENCE

SURGEON'S RESIDENCE (OLD)

ATTENDANTS' QUARTERS (NEW)

WARD D

PHARMACIST'S EXTERIOR ENTRANCE

HOSE REEL HOUSE

SAN FRANCISCO CALIFORNIA

BOILER HOUSE & NECROPSY

PHARMACIST & STERILIZER BOILER

NECROPSY & MACHINE SHOP

PHARMACIST & CLERK'S QUARTERS

TOOL HOUSE & GREENHOUSE

STABLE

PUMP HOUSE

WATER TANKS

U·S·MARINE·HOSPITAL

SAN FRANCISCO CALIFORNIA

WARD A INTERIOR

WARD B INTERIOR

WARD C INTERIOR

WARD D INTERIOR (SOUTH ROOM)

WARD D (WEST ROOM)

ISOLATION WARD

ATTENDANTS' DINING ROOM

PROPOSED EXTENSION TO BOWL VAULT
FROM SOUTHBOUND LIS. BRANCH HOSPITAL
TO WIDE BELT STRAIGHTEN AVE TO 24TH
SECTION WITH ROAD OF FOUNTAINS

[illegible] capacity [illegible]

JTC

September 27, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at San Francisco, Calif., with the exception of the new necropsy building, new attendants' quarters and new operating suite, which will not be required if a new hospital plant is authorized by Congress.

Respectfully,

(Signed) Rupert Blue.
Surgeon General.

The Secretary of the Treasury.

JTC

October 5, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

Supplementing my letter of the 27th ultimo, regarding the repairs and additions needed at the U. S. Marine Hospital, San Francisco, Calif., recommended by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that a refrigerating plant is required at that station as the cost of ice is sixty cents per hundredweight, or about $850.00 per year.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

SAVANNAH, GEORGIA.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

U. S. MARINE HOSPITAL, SAVANNAH, GA.

Report of inspection made January, 1915, with recommendations as to policy to be pursued.

I

GENERAL CONSIDERATIONS.

(1) Location.

The marine hospital at Savannah, Ga., is located on a small plot of land about 6/10ths of an acre in area, bounded on the north by York St., on the south by York Lane, on the east by Abercorn St., and on the west by Drayton St. The building faces north, and the distance from the water front is about six squares and from the Union Station about 3/4 of a mile. There are no trees on the reservation lot and it is turfed on the northeast and west sides.

There is but one building, the hospital, on the reservation. This is a three-story basement and attic structure of brick superstructure and pebbledash finish built in the mission style, with porches on the first and second stories at the east and west ends, and porches on the first story on the north and south sides of the building. The roofs of the porches on the second stories form piazzas for the third story and are not roofed. The building is somewhat arrowform in shape with the long axis extending from Abercorn to Drayton Street.

(2) History.

Relief has been given to sick and disabled seamen at the Port of Savannah since the early seventies, the patients being housed, fed and nursed at one of the local hospitals and the medical service being furnished by an acting Assistant Surgeon. Owing to the growing maritime commerce of the Port of Savannah and the necessity for greater provision for the care of seamen applying for medical and surgical relief, Congress, on March 21st, 1902, appropriated $125,000.00 for the purchase of a site and erection of a hospital for the care of seamen. The site chosen was one formerly purchased by the United States Government as a site for a post office building consisting of a strip 90 X 245 feet fronting on York and Abercorn Streets. An additional strip was subsequently purchased adjoining the former lot 60 X 90 feet and fronting on Drayton and York Streets.

The building was completed and furnished and opened for the reception of patients on November 1, 1906.

It is a substantial structure of Mission design, somewhat gloomy in the dark interior and has a maximum capacity of about 46 patients.

(3) Need of a Marine Hospital.

As relief has been maintained at Savannah for many years and the commercial and maritime interests are constantly

growing. (Savannah being one of the largest ports for the export of cotton in the south) provision for the care of the sick and injured sailor is likely to be continued. (60)

Another important point relative to the maintenance of the hospital here, is that in the investigation of tropical and parasitic disease and pellagra, it has become an important center for this class of work.

(4) Adequacy of Plant.

The present plant is too small to accommodate the amount of work now being done on this station as it is used in a dual manner for the care and treatment of marine patients and those under observation by officers engaged in public health work. The present number of patients is fully up to the maximum capacity of the hospital and under these conditions the space available for their accommodation is inadequate, especially for colored patients, and tubercular and contagious cases.

In addition there is not sufficient space to provide the accessary rooms demanded by modern hospital standards and the requirements of the Public Health investigation work.

The present building is not large enough and cannot economically be altered or extended to provide the increased space needed.

A A new building should be erected on the reservation and connected to present building by corridors. The space in the new building should be arranged so that combined with the facilities of the present hospital not less than 70 patients can be accommodated and provision made for the accessary rooms and facilities needed to meet the special requirements of the station. Minor changes will be required in the existing building.

Quarters for the surgeon in charge are not contemplated either in the proposed or present building.

(5) Acquisition or Disposal of land.

The present site includes all land within the city square, no adjoining land being available except across a public street, and none will probably be needed. The entire reservation should be retained.

(6) Future development or disposal of plant.

The present plant should be retained. The new building proposed in paragraph four above, and the minor improvements recommended under section three will provide for the needs of the station as far as can be forseen for some time to come.

If in the future additional space should be needed it can be provided by the erection of another building on the

[illegible]

(3) [illegible]

[illegible]

(4) [illegible]

[illegible]

(5) [illegible]

[illegible]

(6) [illegible]

[illegible]

present reservation. It is believed that the entire area of the reservation should be reserved for hospital purposes and that quarters for officers should not be erected thereon as the space is limited.

II

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public buildings.
(For details see appendix A)
Total estimate of work recommended, $ 1750.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings.
(For details see appendix B)
Total estimate of work recommended 253.00

(3) Legislative Appropriation for New Construction
(for details see appendix C)
Total estimated cost of work recommended, 50000.00

(4) Appropriations for Administrative Equipment
(for details see appendix D)
Total estimated cost of items recommended, 2910.00

TOTAL $54,913.00

(5) Personnel

Adequate.

III

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in general.

There is but one building on the station.

Building No. 1, Hospital, Four Story, basement, and unfinished attic. Brick superstructure, pebble dash, stucco exterior, tile roof, fireproof throughout. Plastered walls and ceilings, painted pine base and trim, varnished or painted. Floors in central corridors, toilet rooms, operating suite, Pharmacist kitchen, Hospital kitchen and pantries, are terrazzo with marble borders and covered base or wainscot. Operating suite has sanitary glass wainscot 7' 6" high, basement floors cement, all other floors 2 1/4 D & hard maple, stairs from first to fourth floors have marble treads, risers and stringers. All windows are double and hinged. Bearing partitions brick, others are terra cotta, ceilings, low exposed soffits. Steam heat, gas and electric light. Floor area 24222 square feet.

(2) Offices,
Surgeons' Office.

It is located in the southeast corner of the first

floor of the centr l part of the building in a large room but poorly lighted. It is well furnished but a book case is needed.

Pharmacists' and General Office.

Located on the left of the corridor on the first floor at the entrance on York St., is a large room fairly furnished and suited for the purpose for which used.

Office for Public Health Work.

Located in the room originally designed as a linen room. It is considered that a special room is not needed for this purpose as the space in the hospital is limited. The necessary work of this branch of the service could be performed in the general office or surgeon's office and this room used as attendants' quarters, in order to provide a room for isolation purposes on the fourth floor by using one of the attendants' rooms located thereon.

(3) Visitors' Reception Room and Library.

This is located in a room to the left of the entrance from Drayton St., which was originally designed as a small ward. A files case for medical journals is needed for this room, as Savannah is headquarters for the circulating medical journals and books sent out from the Bureau at Washington. Otherwise the equipment is sufficient.

(4) Examining Room.

No special room. Examinations made in old X-ray (now incubator room) out-patient office and surgical dressing room. A few instruments are needed with the increased facilities recommended in Section I Paragraph 4. Such a room should be provided.

(5) Kitchen and Diet Kitchen.

Located in the southeast corner of the third floor is a medium sized room not well equipped. A new gas range to replace the one in use will soon be needed and new and larger sinks are required for this room and the adjoining pantry. A dish washing machine is needed. There is no diet kitchen and no space where one could be installed.

(6) Pantry and Food Storage.

A pantry adjoins the kitchen and is sufficient for present needs. Repairs to the cupboard are necessary.

(7) Store Rooms.

Store rooms for subsistence, general stores, drugs, hospital supplies, linen, records and unserviceable property are located in the basement and are sufficient for the present

Plans of this country part of the building is a large room, 14 feet by 18feet. It is well lighted and is a very nice room to model.

Laboratory and General Office.

Located in the left of the workshop on the first floor as the laboratory is 14x18. It is large room fairly isolated and added for the purpose for which it was.

Office for Public Health Work.

Located in the room originally designed as a class room. It is obvious that a special room is not needed for this purpose as the group in the department is limited. The necessary work of this branch of the service could be performed in the general offices or managerial offices and this room used as additional workroom. In order to provide a room for instructional purposes in the future it is proposed that the wing of the school house facing Jarvis Street.

(f) Janitors' Quarters and Lockers.

This is located in a room in the left of the ground floor facing Jarvis St., which was originally designed as a small ward. A little work for minor repairs is needed to make this room, as formerly, a bedroom for the caretaker. Small lavatory and locker cupboards for the janitor. Otherwise the equipment is sufficient.

(g) Assembly Hall.

No special room. Assembly room is the 1st floor large lecture room. Assembly room and working area through the year. A few instruments are needed with the exception of additional seating accommodation is needed in a lecture room. Use a room should be provided.

(h) Janitor and Girls Janitor.

Located in the basement above of the left hand floor. In a modern school room for well equipped. A new gas range is required the one in the hall room be moved and lavatory place are required for both men and the adjacent nearer. A film cupboard should be made. There is no film library and no place where one could be installed.

(i) Medical and Dental Inspector.

A nearby cloakroom is taken and is adequate for present needs. Lavatory is the adjacent was necessary.

(j) Clerk Stores.

There room are satisfactory. Present stores, School, physical apparatus, lamps, crucible and chemicals equipment. Special is the learned lot the controlled the big product

needs of the station.

(8) Quarters for Officers.

No Surgeon's quarters in the building. Surgeon lives outside and receives commutation.

Acting Assistant Surgeon.

One room and bath room located on the north side of second floor to the east of the elevator shaft. It is sufficiently furnished.

Internes' Quarters.

Located in the room originally designed as a reception room on the right on the east side of the corridor on the first floor next to the stairway and elevator. It is sufficiently equipped.

Pharmacist Quarters.

Consist of five rooms, sitting, dining, bedroom, kitchen and bathroom, located in the east side or wing of the first floor. The rooms are comfortable and well furnished and need nothing with the exception of a new rug for the sitting room.

(9) Quarters for Attendants.

Seven male attendants are accommodated in four rooms on the south side of the fourth floor, one on the north side of the same floor, and two in a room next to the pantry on the north side of the third floor of the building. These quarters are poorly furnished and need new wardrobes, chairs and rugs.

(10) Patients' Dining Room.

Located in the southwest corner of the third floor; is a good sized and cheerful room well furnished and sufficient for the needs of the hospital. Both white and colored patients take their meals in this room, but at different hours. Separate rooms are desirable in this locality and should be provided with the increased facilities recommended in Section I paragraph 4.

(11) Officers' and Internes' Dining Room.

This is a small room located next to the stairway and elevator on the west side of the third floor. China tableware is needed for this room. Equipment otherwise adequate.

(12) Attendants' Dining Room.

This is a small room on the west side of the third floor between the kitchen and patients' dining room with equipment adequate. It is used for colored attendants only. The

made of the shelves.

(8) Lavatory for children.

On everyone's questions in the relation. Lavatory facilities and washing arrangements.

Kitchen Adjacent Lavatory.

One large and both rooms designed on the square with a small floor in the area of the diversion chart. It is quite already hospital.

Infirmary Building.

Initial is the room originally designed as a storage room on the right on the east side of the adjacent of the street floor and in the corresponding and diversion. It is quite already complete.

Laundry Lavatory.

Washing of dirty rooms, drying, dining, between, kitchen and veranda. Heating is the most side or wing of the first floor. The rooms are complete and well furnished and each matching with the washing of a man and the diversion room.

(9) Washing for Attendants.

Large main attendants are accommodated in four rooms on the ground-floor of the fourth floor, one on the south side of the first floor, and two in a room next to the pantry on the north side of the main floor of the building. Large lavatory for young, troubled and more has washing, drying and dress.

(10) Attendants' Dining Room.

Dining is the accommodation corner of the third floor. It is a pale green and covered room well furnished and suitable for the needs of the inmates. Both white and colored people take their meals in this room, but in different hours. Speak six fortnights in this laundry and room. A big middle also the temporary facilities permanent in having 1 paragraph (...).

(11) Kitchen and Dining Room.

This is a room 1 room. Special note is the sanitary on dressing on the east side of the first floor. Meals delivery in morning and this meal. Internal arrangements.

(12) Attendants' Dining Room.

This is a small room on the west side, with a room close first between the kitchen and dining. They are well furnished and well. It is here the diversion arrangements and. The

white attendants take their meals in the patients' or general dining room.

(13) Recreation and Smoking Room.

A small room on the east side of the elevator on the second floor is used for this purpose. It is too small for the number of patients who use it and is poorly furnished; new chairs and a table are needed. Additional space is required and should be provided with the increased facilities recommended in Section I Paragraph 4.

(14) Disinfecting Facilities.

There is an American Sterilizer Co. steam sterilizer with formalin, ammonia attachment, open two ends, located in the basement, steam is supplied from either of the heating boilers when the pressure is raised to 60 to 70 pounds, at which time this boiler is cut off from heating service lines and used independently.

(15) Incinerators.

There are no incinerators; bandages are burned under the water heating boiler. A water jacketed incinerator should be installed in the boiler room for burning infected bandages and dead animals which have died of inoculation in connection with public health investigations, of which there are about 25 per month.

(16) Disposal of Soiled Linen.

It is kept in wicker baskets and clean tin cans. Removed in special baskets by laundry employees. Infected linen is soaked in 5% carbolic solution for 12 to 24 hours before removal to laundry. No laundry in hospital; such work done under yearly contract. No routine system of sterilizing bedding and clothing by steam sterilizer in basement. Only used when considered necessary.

(17) Laundry Facilities.

There are none. Laundry work is contracted out, which appears to be satisfactory.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room.

This is located in the northeast corner of the third floor. It is a large room with terrazzo floor and sanitary glass wainscoting of unusual height. The latter is badly cracked and unsanitary and should be replaced by hard plaster with enamel paint finish. A special system of lighting in which the electric lights are arranged on a rectangular holder made of tubing, and located over and around the operating table, is in use here and said to be effective. Instrument

and water sterilizers are necessary.

Sterilizing Room.

Adjoins the operating room is a small room and contains instrument and dressing sterilizers and cabinets for dressings. The sterilizers are old and need to be replaced with new ones.

Etherizing Room.

Adjoins the sterilizing room; contains a utensil sterilizer, an old Eny Scherer water sterilizer and a wash-up sink with pedal attachments.

Sterilizers.

The gas supply to all of the sterilizers is deficient and causes much delay in the preparation of dressings and sterilization of instruments and utensils. There is a steam line run to the sterilizing room from the hot water heating boiler in the basement, with an exposed valve reed for connection to these sterilizers which has never been used, though there is no apparent reason why all these sterilizers should not be placed in the room designed for them and they be steam heated. The claim is made that it takes two and one-half hours to get sterilizers hot enough to use when gas heated at present.

Surgical Dressing Room.

This is located between the operating room and the small ward on the southeast corner of the third floor; has an entrance through double doors from the adjoining corridor, a fair equipment, terrazzo floor and sanitary glass wainscot. Wash buckets are needed for this room.

(19) X-Ray Facilities.

No apparatus in hospital. Accepted proposal for necessary work from Dr. J. R. Larson, of Savannah, Ga., at from $3.50 to $5.00 per photo or case. This arrangement is satisfactory.

(20) Laboratory.

Located on the north side of the central part of the second floor opposite the elevator shaft. Three rooms are occupied for this purpose (all communicating), viz; the laboratory room, old X-ray and dark rooms. This laboratory is fully equipped for investigations in public health work, and the clinical work of the hospital, including Wasserman examinations, is also done here.

(21) Dispensary.

This room is located to the right of the entrance of the building from the York St. side. It is a large room and

sufficiently equipped for the needs of the station. 61

(22) Wards for Seamen.

There are two wards for seamen on the 2nd floor known as east and west wards, and are used exclusively for white patients, one for surgical cases and one for medical. Colored patients are cared for in a small ward on the 3rd floor adjacent to the operating suite. Both surgical and medical cases are accommodated in the same ward.

There is also one small ward on the 4th floor used for isolation purposes either for tubercular or other patients.

The wards are fairly well lighted, but the exceptionally heavy verandas cut off much light. The colored ward is very crowded. Its normal capacity with 60 sq. ft. per bed is only 8, while there are 11 patients at present.

The two white wards accommodate normally 14 each, a maximum 17. Under present conditions the hospital is working up to its maximum capacity and the colored ward is greatly overcrowded. With the increased facilities recommended in Section I paragraph 4, additional ward space should be provided for both colored and white patients and the colored medical and surgical cases separated.

(23) Quiet Wards.

There are no rooms specifically assigned as such but there are three private rooms which can be used for this purpose when needed.

(24) Wards for Revenue Cutter Officers.

Adequate accommodations are provided. There is one room specifically set aside for this purpose and one additional private room.

(25) Toilet Facilities.

There are ample toilet facilities on all floors for all needs of the building, with shower baths in patients' toilets. All have modern equipment. The dishwashing room adjoining hospital kitchen should be equipped with two new and larger sinks, in place of those now in place, which are small, shallow and unsatisfactory.

There is no segregation of syphilitic patients and under present conditions separate toilet facilities cannot be provided.

With the increased facilities recommended in Section I, Paragraph 4, such separation should be made.

(26) Portable Tubs.

There is one serviceable tub (without rack) and two old zinc lined tubs worn out and unserviceable. A new rack should be provided.

(27) Padded Cells.

No special room for restraint of violent alcholic or insane patients. Only apparatus is a homemade restraint sheet. No arrangement with local authorities for care of such cases.

(28) Necropsy Facilities.

There is a very poor dissecting table stored in the basement which has no means of connection to floor drains, and is not used. The room set aside for necropsy purposes has been devoted to an animal house, as a large number of monkeys, pigs, rabbits and mice are required for research work. All autopsy work is done at a local undertaker's under contract or by courtesy. A new room shall be provided as a part of the increased facilities recommended in Section I, Paragraph 4.

(29) Isolation Facilities.

A room on the 4th floor is used for isolation purposes, capacity 4 beds; smallpox cases are sent to city institutions. The surgeon in charge states that facilities are inadequate for handling tubercular and infectious cases, inasmuch as there is only the one room which normally was used for tubercular cases. Additional accommodations should be provided as a part of the increased facilities recommended in Section I, Paragraph 4.

(30) Out-Patient Office.

This is a small room at the right of the corridor next to the entrance from Drayton St. It is used for the examination of out-patients, making physical examinations and color tests. It requires a carpet rug, an instrument case and some new instruments for special examinations. Occupancy of this room avoids having an office located in the Custom House or elsewhere.

(31) Floor Space.

The total net floor space of the hospital is as follows:

Fourth Floor	1777	sq. ft.
Third Floor	4149	" "
Second Floor	4236	" "
First Floor	3581	" "
Basement	4418	" "
	18161	" "

	18181 sq. ft.	61
Total Hall Space	6061 " "	
	24222 " "	

Total net floor space for hospital uses is	6[illegible]
" " " " " living quarters, (except halls) is	13[illegible]
" " " " " halls (including quarters) is	25[illegible]
	10[illegible]

(32) Bed Capacity and Space allowed.

The total normal capacity of the hospital is 36, maximum 44, with 4 additional beds in isolation room.

On a normal basis each patient in the large wards has 90 sq.ft. of floor area and 1[illegible]40 cubic feet of air space. In the colored ward the floor area per bed is 63 sq.ft., air space 670 cubic feet. When this ward is crowded as it usually is the floor area is only 5[illegible] sq. ft., air space 70[illegible] cubic feet. There are two private rooms accommodating normally one each, maximum two each.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1[illegible], 1913, 1914 and also for the period from July 1 to Dec. 31, 1[illegible] the calendar years 1913 and 1914:

	Fiscal years			July 1 to Dec. 31st.	
	1909	1913	1914	1913	1914
No. days hospital relief furnished	5215	9502	10216	5[illegible]	5310
Daily average hospital patients.	14.2	26.2	28.		
Total daily cost per hospital patient.		$2.61	$2.42	(see note)	
Number of hospital patients.	267	524	377		
Number of out patients	5[illegible]	7[illegible]7	1[illegible]58		
No. of times treated	921	1[illegible]22	1116		

On Jan. 20 there were 44 patients of whom 3 were chronics, one tubercular and 6 pellagra cases. There were 9 colored patients and 35 white.

The maximum daily number of patients for the last 4 years was 4[illegible], minimum 14. The hospital relief furnished in 1914 was 94% greater than in 1[illegible] and 7[illegible] greater than in 1913. For the first 6 months of 1915 it has been practically the same as for the corresponding period of last year. The number of out patients has increased nearly 5[illegible] since 1909. 61

NOTE: The daily cost is figured without certain attendants employed in caring for pellagra cases, while the total hospital days includes these cases.

To determine the relative cost per day of the hospital patients the total cost given in form should be increased by an estimated amount of $110.00 per month for 1913 and 1914, being the wages of one clerk at $75.00 and one attendant (night watchman & nurse) at $35.00.

There are other attendants paid from appropriation for investigation work, namely 2 laboratory men, 1 animal attendant.

(34) Ambulance Service.

The station has no ambulance equipment. Service is furnished under contract with private parties. Round trip white patients $3.00, colored $2.50. Facilities adequate.

(35) Heating, Power Plant & Ventilation.

The building is heated by a central heating plant, consisting of two return tubular locomotive type boilers, 25 HP each, connected to run separately, either at high or low pressure, ranging from 2[illegible] for heating to 70# for steam sterilizing work, only one boiler being used for heating in the coldest weather. When boiler is being run on high pressure it is fed from a 3" x 2" x 3' Deane of Salyers duplex boiler feed pump; at other times by a[illegible] pressure which is 5[illegible]. This pressure is also used for the water heating boiler when run at maximum pressure of 2[illegible]. The heating system is composed of direct and indirect steam radiation, direct radiation being used for all heating purposes, and the indirect is used in hot weather as a cold air ventilation system. The present hot water supply is from a tank with a steam coil connected to water heating boiler. This tank which is about 1[illegible] gal. capacity is entirely too small and should be replaced by one of at least 3[illegible] gallons, as the demand is so great that hot water supply is very inadequate. The present heating boiler is adequate for this large tank and for steam sterilizer very as well. A chain hoist should be supplied for attaching to davit now in place for removing ashes.

The boiler blow off and drain from the two heating boilers is too high to drain sediment out of heating return pipes, both boilers should be connected to the sewer pipe below the basement floor near by, which would cost about $60.00; most of the work can be done by the engineer who appears very capable. Ventilation is by means of top and bottom regis-

tors to vent steam and through transom windows, which is adequate and satisfactory.

(36) Illumination.

The building is adequately illuminated, but the type of fixtures and glass ware is unsatisfactory, especially in wards and clinic rooms where patients now must look at exposed clear glass bulbs. These fixtures should be changed to modern hospital type fixtures.

(37) Decoration.

All rooms are decorated and are of bare grayish colors not adapted to the type of building and locality. These should be repainted throughout in colors adapted to the local needs and in accordance with color schemes recommended in a general report for hospital work.

(38) Telephone and Call System.

There is one direct connected city telephone in pharmacists' office, Bell system, with extension in laboratory. There is a call system with plug outlets for flexible cords so that push button may be placed at each bed if desired in each of the 8 wards. There is also one push button in isolation ward and one in each of the 8 private rooms. There are two annunciators with 3 drops on the 2nd and 3rd floors and both bells and annunciators are designed to indicate simultaneously. The system is not in proper working condition and not properly designed. The annunciators should be 8 point instead of 3 so that each ward and private room will register separately. There is one bell in corridor of 1st floor with push button in surgeon's office and out patient office. There is an intercommunicating telephone system of 12 stations, 1 in use connecting the various parts of the building. It is in good condition.

(39) Ice and Refrigeration Facilities.

There is no refrigeration plant and none is needed at this station. Artificial ice is supplied as needed; the present old type water coolers should be replaced by sanitary water bottle coolers on each floor.

(40) Water Supply and Fire Protection.

Water is obtained from 6" cast main on York Street through 2" connection. Water supply is artesian wells, pump pressure; quality is excellent and supply ample. Pressure 50 to 55 pounds. In case pressure is inadequate a pump in the basement is available for pumping water into storage tank on the 4th floor. Under present conditions hand pump is rarely used except for increasing pressure in case of fire. Tank is kept cut out.

There are 4 hose reels, one on each floor except the basement, equipped with 50 feet of 1 1/2" linen hose.

[illegible] the [illegible] [illegible] [illegible]

There are 5 chemical fire extinguishers, 3 gallon Underwriter type, one on each floor and basement. There are 2 city fire hydrants opposite reservation. Fire engine house is one block away. 61

Facilities adequate.

(41) Fire Alarm System.

There are five electric gongs, one on each floor, sounded simultaneously by push button at elevator shaft from each floor. The location of fire is indicated by annunciators with drop for each floor. Annunciators are located above push button on each floor. Drills are not held regularly.

City fire alarm box is within one block.

Facilities adequate.

(42) Sewer and Other Drainage.

All storm and sanitary sewerage is discharged into separate city sewers. The sanitary sewerage is discharged into 5" city sewer in alley, through 5" connection, and storm water into 6" city sewer in Abercorn St., through 6" connection. In good condition and adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

There are no streets, roads or fences. There is a cement sidewalk on the 3 sides of the reservation. There is a cement sidewalk from York Street to entrance to pharmacist quarters and from Layton Street to entrance to out patient office. Main entrance steps lead direct to sidewalk. The grounds are well kept and in good order.

(44) Wharves, Etc.

None; no waterfront.

(45) Livestock, Etc.

None, and none required.

(46) Personnel.

On duty at this station there are 1 commissioned officer (P.A. surgeon), 1 Acting Assistant Surgeon, 1 interne, 1 pharmacist and 9 attendants, classed as follows: 1 engineer, 1 cook, 3 nurses, 1 messenger, 2 hallmen and 1 pantryman. The three nurses are white, the rest of the attendants are colored. There are five attendants on duty at this station in addition to the above who do not sleep on the reservation and are paid from the Pellagra Investigation payroll.

(47) Records.

The records of the station are properly kept, and in good order. The clinical records are in some instances very brief and incomplete.

61

(48) Books.

The station library contains a large number of modern works and is thoroughly up to date.

(49) Purchase of Supplies.

Supplies are purchased on yearly contracts obtained in the usual manner and the service is satisfactory. Daily deliveries are made and no large quantity of supplies are kept on hand. Purchase on three months accepted proposal would have no special advantage. Purchase in open market would obtain goods of better quality, but not much cheaper.

APPENDIX A.

Marine Hospital at Savannah, Ga.

Appropriation for Repairs & Preservation of Public Buildings.

- - - - - - - - - - - - - - - - - - - -

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of Report.	ITEMS	Estimated cost.
1	Repairs to skylight.	$ 50.00
1	Remove all sanitary glass wainscot and substitute hard plaster and broken sections of wainscot to be removed; Sound sections stored in basement.	400.00
37	Decorating interior of building.	1200.00
38	Repairs to bedside call system.	100.00
		$ 1750.00

APPENDIX B.

Marine Hospital at Savannah, Ga.

Appropriation for Mechanical and Electrical Equipment.

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEM	Estimated Cost.
35	300 gallon hot water tank with steam coil to replace small one now in use.	$175.00
35	New connections for boiler blow off to sewer. Material only, list to be furnished by officer in charge through its engineers.	60.00
35	Chain hoist for removing ashes to be attached to davit now in place.	18.00
		$253.00

APPENDIX C.

Marine Hospital at Savannah, Ga.

New Construction.

[illegible] be [illegible] provided.

[illegible] hereunder require legislative appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of Report.	Item	Estimated cost.
II 4	New Hospital Building and miscellaneous alterations to existing building.	$50,000.00
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]

APPENDIX D.

Marine Hospital at Savannah, Ga.

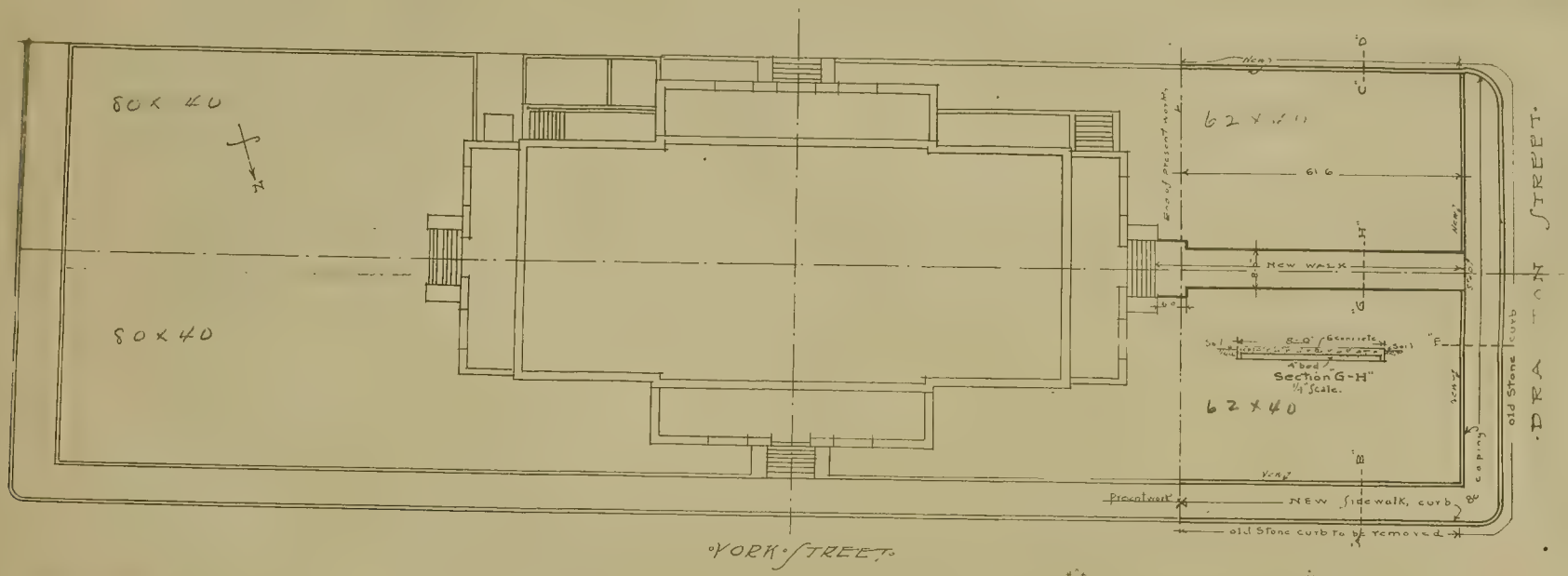
Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	ESTIMATED COST.
15.	Incinerator for animals, etc.	$ 500.00
30.	Office (out-patient)	206.00
2.	Office (Hospital)	50.00
22.	Wards	700.00
18.	Operating and surgical dressing rooms	600.00
4.	Examining room	25.00
5.	Kitchen	75.00
8.	Officers quarters	45.00
9.	Attendants quarters	250.00
56.	New direct indirect lighting fixtures in ward room	400.00
	TOTAL.	$2310.00

Extended [illegible] page 16.

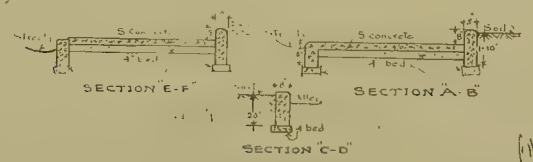
621



U. S. MARINE HOSPITAL
SAVANNAH, GA.
Drawing No. R 70.
Drawn by [illegible] Checked by CMM
4-3-02 4-3-09

APPROACH PLAN

Showing completion at west end of lot.
Scale 1/16" = 1'-0"



[illegible] HOSPITAL

EAST · FRONT

NORTH · FRONT

[illegible]EST · FRONT

WEST · FRONT

[illegible] AND · WALL · CASE · EAST

EAST · AND · SOUTH

[illegible]

[illegible]

U·S·MARINE·HOSPITAL·

[·SAVANNAH·GA·

[OPERATING·ROOM·DAMAGED·WAINSCOT

[·SURGICAL·DRESSING·ROOM·

[PRESENT·STERILIZING·ROOM·

[·WARD·WHITE·

[·WARD·COLORED·

[·WARD·COLORED·

[LABORATORY·

[·LABORATORY·

JTC

September 25, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Savannah, Georgia.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

STAPLETON, NEW YORK.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

Preservation of Public Buildings.
under Appropriation for Mechanical
and Electrical Equipment.

U.S. MARINE HOSPITAL, STAPLETON, NEW YORK.

Report of inspection made November, 1914, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The hospital is located in Stapleton on Staten Island on a reservation about 9.755 acres in extent and bounded on the north and west by adjoining property, on the east by Bay Street and on the south by Marine Avenue. The property overlooks the entrance to New York harbor, the Narrows, Bay Ridge and, in the distance, Coney Island. It is a gentle slope from west to east, is delightfully situated and very desirable for hospital purposes as there is plenty of room for present and future needs, good surface drainage and abundance of fresh air and sunshine.

There are a number of fine old trees which add to the pleasing appearance of the reservation. The hospital building is located near the center of the reservation, consists of a central portion and two wings, one at the north and one at the south end. The building is of a colonial style of architecture with a portico and square columns on the side facing the harbor and consists of four stories and a basement.

It has recently been remodelled with new interior construction of walls, floors and trim with new design for arrangement of working units, and brought up to a modern standard of construction.

(2) History.

Previous to 1879, sick and disabled seamen at the port of New York were treated under contract at different local hospitals and, at one time, they were distributed among no fewer than eleven different institutions of this character, located in New Yor, Brooklyn and Jersey City.

In 1879, by permission of the War Department, Bedloe's Island was turned over to the Marine Hospital Service for hospital purposes.

A new brick building of three stories was erected near the main barracks and attached by continuous floors from the barrack corridors.

This and the other buildings on the island were occupied by the Service until 1883, when it became necessary to vacate the island on account of the contemplated erection of the Statue of Liberty thereon.

In this year, a lease for two years of the Seaman's Retreat at Stapleton, Staten Island was obtained from the Marine Society of New York, the owners of the property, at an annual rental of $6,500.00 with the privilege of purchase at any time at an amount to be agreed upon not ex-

ceeding $250,000.00 and $30,000.00 in addition if the water front was included.

At the end of the two years, the lease was renewed but the rental was increased to the sum of $8000.00 per annum with the same privilege of purchase as before. The lease was renewed from time to time and the building occupied for hospital purposes until May, 1903, when the property was purchased by the Government for the sum of $250,000.00.

It has been used as a Marine Hospital since that time and, within the last two years, has undergone extensive interior remodelling and construction of additions to the north and south wings.

(3) Need for a Marine Hospital.

As this is the largest port in the United States and has the largest amount of shipping entering it, the applicants for relief from the Service are large in number and provision for their accommodation is a necessity.

The retention of the present plant is desirable and, if a demand for future development should arise, there is sufficient land for its expansion.

(4) Adequacy of Plant.

The existing plant, as remodelled, is adequate for the immediate prospective needs only.

(5) Acquisition or Disposal of Land.

There is a considerable area of unoccupied land adjacent to the reservation. The present reservation is of sufficient area, however, for all probable needs of the station.

Its entire area is needed for hospital purposes and none of it should be disposed of.

(6) Future Development or Disposal of Plant.

The hospital building as remodelled lends itself to but very small expansion beyond its present capacity nor is its arrangement such as to justify further expenditures looking to increased hospital facilities in the present buildings. Further capacity must, therefore, be provided in additional buildings. The present plant should be retained for hospital purposes.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)

Total estimated cost of work recommended, $19,535.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended, 8,050.00

(3) Legislative Appropriation for New Construction.
(for details see appendix C)
Total estimated cost of work recommended, 29,000.00

(4) Appropriations for Administrative Equipment
(for details see appendix D)
Total estimated cost of items recommended, 49,845.00

TOTAL - - - - - - - - - - - - - - $106,420.00

(5) Personnel.

One additional attendant (painter) is needed:- $45.00 per month.

III.

DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Main Hospital Building;- a four-story and basement, blue stone superstructure, copper roof and cornice, fireproof throughout. All ward rooms have composition floors and base. Halls, corridors and toilet rooms have terrazzo floors and marble base or wainscot. Basement has cement floors and base. All other floors hard maple, pine base and trim. Plaster walls and ceilings throughout the building. Steam heat, partial mechanical ventilation, electric lights. Floor area, 48,586 square feet.

Building No. 2;- Laundry. Two story wood frame on brick foundation, clapboard exterior, shingle roof, 3¼ D & M floors, plaster walls and ceilings, pine base and trim, painted, steam heat, electric light. Floor area, 5,025 square feet. Building is very old and past repair. Should be superceded by new brick building.

Building No. 3;- Tubercular Patients' Privy. One story, wood frame over pit, clapboard exterior, shingle roof, no interior finish. Floor area, 63 square feet. Very old and unsanitary. Should be removed from premises and present necropsy at once remodelled into toilet and bathhouse for these patients, pending construction of permanent building.

Building No. 4;- Necropsy. One-story wood frame on brick foundation, clapboard exterior, shingle roof, 3¼ D & M floors, plaster walls and ceilings, painted, pine base and trim painted, stove heat, oil lamps. Should be repaired and used for tubercular patients' toilet and bathhouse, with steam heat and electric light. Floor area, 332 square feet.

Total estimated cost of such improvements, [illegible]

(4) Improvements for Electrical and Electronic Equipment of Units:
Buildings. (for details see appendix 3)
Total estimated cost of such improvements, [illegible]

(5) Multiplexing Apparatus for New Constructs.
(for details see appendix 4)
Total expenditure used at such improvements, [illegible]

(6) Appropriations for Electronic Equipment.
(for details see appendix 5)
Total estimated cost of these improvements, [illegible]

T O T A L - [illegible]

(8) Personnel.

The additional personnel [illegible] is [illegible] per month.

III.

[illegible]

(1) Buildings in general.

[illegible]

Building F. - I. - Theory. [illegible]

Building G. - Experimental Station. [illegible]

Building H. - Electronic Equipment. [illegible]

Building No. 5;- Barn and Attendants' Quarters. Four story, brick superstructure, painted, shingle roof, 3¼ D & M pine floors, plaster walls and ceilings, not painted, pine base and trim painted, hot air furnace, oil lamps. Floor area 7,884 square feet. Building very old and unsafe and beyond repair; should be condemned and removed and a new brick barn erected.

Building No. 6;- Surgeon's Residence. Three story, English basement and sub-basement, blue stone superstructure, tin roof, cement floor in sub-basement, 3¼ D & M pine floors elsewhere, plaster walls and ceilings, painted, pine base and trim painted, local hot water heat, gas and electric light. Floor area 8,134 square feet. This building is very old and beyond economical repair and should be replaced by a new building.

Building No. 7;- Junior Medical Officer's Residence. Two and one-half story stucco on hollow tile with basement, wood cornice, shingle roof, cement floor in basement, 3¼ D & M pine floors elsewhere, plaster walls and ceilings, painted, pine base and trim, varnished, local hot water heat, electric light. Floor area 8,134 square feet. Condition fair. Minor repairs only are needed.

Building No. 8;- Watchman's House, at gate. One story brick, painted, tin roof, 3¼ D & M floor, plaster walls and ceiling, painted, D & M wainscot and pine trim painted, stove heat, gas light. Floor area, 118 square feet.

Building No. 9;- Tool shed. One story wood frame on ground, D & M exterior, tin roof, 3¼ D & M pine floor, D & M sheathing walls and ceiling, no interior paint. Floor area, 30 square feet, no heat, no light. Building should be condemned and removed, as not needed.

Building No. 10;- Attendants' Privy. One story wood frame over pit, shingle roof, clapboard exterior, 2¼ D & M floor, no interior finish, whitewashed inside and outside; should be removed as not needed.

(2) Offices.

The central part of the first floor of the main building is assigned for office purposes. The main entrance at the center of the building opens into a rotunda and arranged on each side of this space are the offices of the Surgeon in charge, Junior Medical Officers, Pharmacists and Dispensary. These rooms are all of new construction, plaster walls, oak trim, and floors, are well lighted and admirably adapted for office purposes. These rooms have not been furnished nor occupied at this date, but their early tenancy is under consideration.

(3) Visitors' Reception Room.

This room is located on the first floor adjoining the Junior Medical Officers' office and next to the receiving or examining room. It is rather a small room, has terrazzo floors and oak trim, and is not furnished or occupied at the present time.

(4) Examining Room.

This room is next to the reception room and has the same interior finish and is unfurnished. A door leads from this room into the junior medical officers' room.

The visitors' and examining rooms have a separate entrance to the north of the main entrance to the building and one at the rear next to the elevator shaft, which is convenient to both of these rooms. The front entrance is placed opposite the visitors' reception room on account of an entrance to the basement opposite the receiving room. This is not a good arrangement as this makes a turn on the veranda necessary when a stretcher is used to carry ambulance cases to the elevator.

(5) Kitchen and Diet Kitchens.

A very large room is assigned for kitchen purposes in the basement of the north wing but is not yet furnished or occupied.

As designed, it will have, when finished, a complete outfit, such as range steam tables, vegetable and stock kettles, sinks, clean and soiled dish counters, dish washers, tables and refrigerators. A dumbwaiter connects the kitchen with the upper floors of the hospital.

At the present time and until the reconstruction of the building is accomplished, the kitchen is located in the basement in the south wing, directly under the Assistant Surgeon's quarters. The work of preparing the food is rather crowded and unsatisfactory under such an arrangement and the intention is to occupy the large kitchen in the north wing at as early a date as practicable.

A full kitchen equipment sufficient to bring it up to a modern standard, it is estimated, would cost about $5,886.00

There are no rooms assigned for diet kitchens. There is a serving room adjoining the dining room on the first floor in the north wing and one on the second floor adjacent to the dumbwaiter leading from the kitchen.

There is a small dispensary room at the end of each of the larger wards and these could be furnished with electric heaters on which to warm food supplies for the wards without interfering with the purposes for which these rooms were originally designed.

(6) Pantry and Food Storage Rooms.

Adjoining the kitchen across the hall on the west side of the basement in the north wing are located the refrigerator and meat rooms, and diagonally across the central hall from these is the kitchen pantry and opposite this is a kitchen storeroom. These rooms are not used at the present time.

(7) Storerooms.

Storage rooms for hospital supplies, engineer's and miscellane-

ous supplies and patients' clothing are located on the east side of the basement. A large room in the attic on the east side of the building and several rooms in the old "White House" are also used for storage purposes.

The rooms enumerated above are considered ample for present and future needs.

(8) Quarters for Officers.

Surgeon in Charge. These quarters are located in a two story and attic building, situated near the front and north side of the reservation. This building has a basement and sub-basement and an annex at the rear, of wooden construction. In the sub-basement is a small steam heater, a hot water heater for the baths, toilets and kitchen, and a coal bin. In the basement proper are located a servants' room, small hall, servants' bathroom and toilet, laundry and drying room.

On the first floor is a parlor, library and in the the annex at the rear, a dining room and kitchen and kitchen storeroom.

On the second floor there is a hall, bathroom, and two bedrooms.

On the attic floor there is a small bedroom, two bedrooms and a bathroom. A wide veranda is placed on the east and south sides of the building.

8 These quarters are comfortably furnished but some interior finishing is required.

Junior Medical Officer's Quarters. Two sets of quarters for these officers are located in a two story, attic and basement building, placed well towards the front of the reservation on the south side of the entrance roadway. Each set of quarters has a veranda adjoining the first floor, a parlor, reception room, dining room, pantry, kitchen and storeroom. In the basement of each set of quarters is a large open room, storerooms, fuel room, laundry and hot water heating apparatus. On the second floor there is a library, three bedrooms and a bathroom. In the attic of each quarters is a servants' bath and a bedroom and two attic rooms. The ceiling of the parlor in the set of quarters on the north side has been damaged by water from a broken radiator and needs redecorating. A new set of furniture is required for the parlor in the quarters on the south side. In the south wing of the main building and on the first floor are two sets of quarters for junior officers. One consists of parlor, dining room, bedroom, kitchen, bathroom, and pantry. This set of quarters has no servant's room. The other has a parlor, dining room, bedroom, bed alcove, pantry, kitchen, bathroom and two servants' rooms, one used in connection with the other set of quarters. This set of quarters is now being used for office purposes during the refitting and remodelling of the building.

Internes' Quarters. The Internes, two innumber at present, have

quarters on the second floor of the central part of the main building, opposite the rooms for Revenue Cutter officers and consist of two bedrooms, a library or sitting room and a bathroom. A small dining room, adjacent to the dispensary, is used for the accommodation of these officers.

Senior Pharmacist. The Senior Pharmacist is quartered on the first floor of the main building between the central part and the south wing, and occupies a parlor, dining room, two bedrooms, a kitchen and bathroom.

(9) Quarters for Attendants.

Twenty-five of the staff of thirty attendants have quarters on the reservation and five married attendants go to their homes each night when off duty. The twenty-five are quartered on the fourth floor of the main building in rooms set apart for them and in the old hospital building at the rear of the reservation, known as the "White House" and in the second story of the laundry building. Those housed in the two latter places will be quartered on the fourth floor of the main building when the interior finish is completed.

All of the quarters described need additional furniture, particularly those of the surgeon in charge and the junior officers. The sum of $1,000.00 is estimated for this purpose. Part of the furniture in the quarters of the medical officer in charge is owned by that officer.

(10) Patients' Dining Room.

This is located on the second floor in the north wing and is adjacent to a serving room and dumbwaiter. It is not occupied for the reason given in previous paragraphs.

At the present time, the convalescent patients take their meals in a room adjoining the temporary kitchen in the basement. Both this arrangement and that for the attendants is crowded and uncomfortable.

For both the attendants'and patients' dining rooms considerable equipment is necessary to put them in serviceable condition and an estimate of $1,516.00 is made for the purpose.

(11) Internes' and Officers' Dining Room.

This is located on the first floor near the dispensary but is not used at the present time for the same reasons that the occupancy of the other rooms has been delayed. At the present time, the Internes take their meals in rooms designated as a servant's room on the plan.

(12) Attendants' Dining Room.

This is located on the first floor with a serving room and dumbwaiter adjacent. It is not used at present, the attendants taking their meals in a basement room in the south side near the room now used as a

kitchen.

quarters on the second floor of the central part of the main building, namely the three for Russian Office attaches and another is for Germans, a Jewish or Russian one and a Bulgarian. A small staff, mostly Germans, is the difficulty, is used for the accommodation of these officers.

Under Consideration. The Soviet Government is prepared to the first floor of the main building between the central part and the wing, and erecting a porter, dining room, two bedrooms, a kitchen and bathroom.

(i) Conditions for Admission.

Possibility of the small of Jewish Nationals into membership in the resources and life activities of the Jewish Jewish community and all Jews. The Soviet-Jews are guaranteed in the Soviet Union; if the main building is ready and equipped for them and is the only Jewish building at the disposal of the Jewish Nationals, known as the Jewish Jewish community of the Jewish building. Those known in the Jewish place will be guaranteed on the forth floor of the main building, the Jewish Jewish is available.

(ii) of the property Jewish and Jewish Jewish, particularly those of the workers in Jewish and the Jewish Jewish. The use of Jewish is guaranteed for this period. Most of the Jewish in the country of the medical officer is mainly paid by the Jewish Jewish.

(iii) Students' Jewish Jews.

This is Jewish in the second floor on the north side and is adjacent to a dining room and dormitory. It is not necessary for the Jews given in previous paragraphs.

If the present line, the complimentary provision has been made with a view adjusting the employers system in the Jewish. What has been suggested was that the arrangements be accepted and accomplished.

The work the administration and political Jewish Jewish Jewish Jewish is necessary in not some in administration modification but the work so it is, is made for the purpose.

(iv) Jewish and Jewish Jewish.

This is Jewish in the Jewish this and the Jewish, but in the case of the present Jewish the Jewish Jewish that the Jewish of the Jewish Jewish Jewish Jewish. In the present time, the Jewish Jewish Jewish Jewish in Jewish Jewish in a Jewish's room in the place.

(v) Jewish Jewish Jews.

This is Jewish on the first floor with a Jewish Jewish and Jewish Jewish. It is not used at present. The Jewish Jewish Jewish Jewish in a Jewish room in the Jewish. Jewish Jewish Jewish Jewish Jewish Jewish.

Jewish.

(13) Recreation and Smoking Room.

There is no room assigned or available for recreation rooms in Building No. 1. It is recommended that two portions of the front veranda, second story, be inclosed with glass partitions in the north and south verandas for this purpose, which will give desirable space and access to the wards. While these will not be as large as desired, it will probably be satisfactory.

(14) Disinfecting Facilities.

The present disinfecting equipment is located in an areaway west of the boiler room and, with minor repairs to roof and new windows to shut out dust and weather, is a satisfactory location. However, a suite of rooms has been prepared in the basement next the elevator for this equipment, but it would now be necessary to tear out a portion of the exterior walls to get the apparatus into this building at all. This room is better adapted to a necropsy room and morgue.

(15) Incinerators.

The present means of incineration is a bonfire in the yard for papers and trash and an old boiler, previously used for heating, set up in the yard, with a stack built over the firebox and, for infected bandages, etc. Neither are safe or satisfactory and new coal-burning incinerator should be installed in the basement of Building No. 1 where smoke connections can be had with a high chimney.

(16) Disposal of Soiled Linen.

Soiled linen is removed from the wards and rooms in bundles by inclosing the linen sheets and then carried to the laundry for treatment. In suspicious cases, the linen is soaked in bichloride of mercury solution before being carried to the laundry.

(17) In contagious cases, the linen and bed mattresses are sterilized in the Kinyoun-Francis sterilizer located in the basement of the building. Sanitary hampers or baskets, or sterilized canvas bags, should be used to convey the soiled linen to the laundry.

(17) Laundry Facilities.

The present laundry is old and inadequate and housed in an old wood framed dwelling, which has never been satisfactory and is now beyond repair. A new brick building with modern equipment should be provided, which would also contain room for a carpenter and a paint shop.

It is here noted that the water used at present is very hard and unsatisfactory for laundry purposes. Provision should be made for catching rain water to be used for laundry purposes, at least until such time as satisfactory water can be supplied.

It is understood that new water mains are being laid to bring water from the New York supply, which will be of a satisfactory character for laundry purposes, and when this is accomplished the retention of rain water may be abandoned, so that this provision might be more or less temporary.

(18) Operating and Surgical Dressing Room Facilities.

The operating suite is located on the third floor in the center

of the building. It is well designed and up to modern standards in that respect. It consists of two large operating rooms on the west side of the corridors and directly opposite is a Surgeon's disrobing and wash room, an etherizing room and a toilet room.

No special surgical dressing room has been provided for but as one of the two operating rooms can be used for septic cases and for a dressing room, it is considered that such a special room is not required.

The above arrangement of the Surgical division is admirable and, when furnished and in use, should make a very satisfactory working unit.

To furnish this division in a complete manner and fully up to a modern standard of equipment, it is estimated that $6,682.00 will be required.

At the present time, and until the completion of the alterations to the building, the surgical operations are performed in a room partitioned off from the south ward on the second floor and the surgical dressings are done in another screened off partition of the extreme south ward.

(19) X-Ray Facilities.

A portion of the ward next to the surgical section on the south side has been partitioned off to provide room for a Waite and Bartlett X-Ray machine and accessories. The machine is in place but, owing to some delay in fitting up the room for its reception, no demonstration of its working abilities has yet been made by the makers. This machine cost $1,840.00 and to provide a complete X-Ray outfit in addition to this it is estimated that $2,492.01 will be required.

Adjoining this X-Ray room, and separated from it by a lead lined partition, is a dark room for developing purposes. The X-Ray equipment is of high standard.

(20) Laboratory.

This room is temporarily disarranged while the reconstruction work is going on. It will be located across the corridor from the south operating room and will require $1,488.00 to equip it in an up-to-date manner and, when this is furnished, the facilities. The present laboratory outfit is sufficient for ordinary clinical purposes such as examination of blood, urine and sputum, etc.

(21) Dispensary.

This room is located on the west side of the central part of the building off the rotunda and across the corridor from the Surgeon's office. It is fairly furnished and equipped and sufficient for present needs.

(22) Wards for Seamen.

The building, as remodelled, provides space as follows:

First Floor. One large ward and one small ward of 13 and 4 beds normal capacity, total 17 beds.

Second Floor. Three large wards and one small ward of 17, 17, 18 and 5 bed normal capacity, total 57 beds.

Third floor. Four large wards of 18, 18, 17 and 16 bed normal capacity, total 69 beds.

No wards are indicated for the fourth floor but there are two large recreation rooms for nurses and one small and one larger dormitory adjoining one of the recreation rooms which are available for ward purposes in an emergency. It is probable that the small ward on the first floor will have to be utilized for dining room space, as the areas originally designated are inadequate.

Not using the fourth floor for ward purposes, the normal capacity of the hospital is 143 seamen, maximum 168. If the space on the fourth floor indicated as available for emergency wards is utilized, 25 to 32 additional patients can be accommodated in 4 wards, or an emergency total of 200 for the entire hospital. The building as a whole has not been put in commission but the hospital is quartered in the south end temporarily. The classes of patients assigned to the various wards has not been determined. The wards are sufficient in number to classify diseases as may be desired.

Tubercular Wards. Tubercular patients, at present, are quartered in tents in the rear of the main building. During the winter months, they will be accommodated in one of the wards of the main building. A frame building should be erected to accommodate such patients in one end and contagious cases in the other.

(23) Quiet Wards.

There are no rooms specifically assigned for this purpose.

It is possible, however, to utilize some one of the rooms on the fourth floor originally intended for attendants' quarters. Two rooms on the second floor, designed for sick officers' quarters, can also be used as quiet rooms, whenever not otherwise occupied. Although the facilities available are poor, sufficient space can be obtained when needed in the manner indicated.

(24) Wards for Revenue Cutter Officers.

There are two rooms for this purpose on the second floor, each provided with toilet. Two, and in emergency, three such officers can be accommodated. Facilities are adequate.

(25) Toilet Facilities.

The toilet facilities are modern and more than ample, except for tubercular patients in yard. Each ward has its own toilet room. One ward can be assigned to syphilitic patients who will thus be separated,

as to toilet accommodations, from other classes of patients. Tubercular patients' toilet and bath should be provided in remodelled necropsy building, pending construction of building for tubercular patients, as recommended in paragraph 22.

(26) Portable Tubs.

There are no serviceable portable tubs at the station and at least two are required with one rack for raising and lowering patients that could be used on both tubs.

A number of typhoid fever cases are received each year at this station and the portable tubs are required in the treatment of these cases.

(27) Padded Cells.

There is no padded cell or room for the confinement of alcoholics or temporary insane and one should be provided for this class of cases. Space is available in the basement.

(28) Necropsy Facilities.

At present, building number 4, a one story wood framed building is used for necropsy purposes. This should be abandoned and the space designed for disinfector room in basement building number 1 be assigned for this purpose. A new drain and cesspool in the floor and a sink is all that is needed to supply a modern equipment except one door should be widened. The one next to the elevator should be made 3'-6" wide instead of 2'-6" as at present.

(29) Isolation Facilities.

There is no isolation building at this hospital. A small room on the fourth floor with two beds is used as a detention ward. Contagious cases are usually taken care of by other institutions. Tubercular cases are housed in tents except in severe weather when they are taken care of in one of the wards of the hospital. A new building to house both tubercular and contagious cases should be constructed in the rear of the main building.

(30) Out-Patient Office.

This is located in New York, in the Barge Office, at the Battery and comprises three rooms, a waiting room, dispensary and office, is sufficiently furnished and well adapted for the purpose. One Assistant Surgeon and one attendant are on duty there.

(31) Floor Space.

Total net floor space of main building:

Basement	8,410	square feet.
First floor	8,380	" "
Second Floor	8,510	" "
Third floor	9,760	" "
Fourth Floor	5,550	" "
Total	40,610	" "
Total hall space	8,080	
Total floor and hall space		48,690 sq. ft.
Total net floor space for hospital uses		64%
Total net floor space for living quarters (except hall space)		19%
Total net floor space for hall space (including quarters)		17%
		100%

Floor space in the basement, in the shape of areaways outside the walls of the main building, has not been included.

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital, exclusive of the fourth floor is 143 beds for seamen and two beds for officers of the Revenue Cutter Service. The maximum capacity of the same space is 168 beds for seamen and three beds for Revenue Cutter Officers.

In addition, there is a considerable area on the fourth floor originally intended for dormitories and recreation rooms for attendants which, in an emergency, can be devoted to ward purposes leaving sufficient space for attendants.

This would provide for from 25 to 32 additional patients, making the emergency capacity of the hospital 200 beds for seamen.

The hospital is supplied with tents which can be set up in the rear of the main building. At present, 8 tubercular patients are cared for in this manner.

On a normal basis, with the exception of the fourth story, each patient has 90 to 110 square feet of floor space and 1100 to 1300 cubic feet of air space.

On the basis of 25 patients in the fourth story, the floor space per patient would be 80 to 95 square feet and air space of 700 to 800 cubic feet.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914 and also for the period from July 1 to October 31 for the calendar years 1914 and 1913.

	1909	1913	1914	Jul 1 to Oct 31 1913	Jul 1 to Oct 31 1914
Number of days hospital relief furnished,	40991	25344	30164	9423	12488
Daily average hospital patients,	112.30	69.43	82.64	--	--
Total daily cost per hospital patient,	--	$1.71	$1.61	--	--
Number of out-patients,	2589	2207	2703	--	--
Number of hospital patients,	2241	2207	2357	--	--
Number of times treated,	4904	3736	4353	--	--

Basement	2,112 square feet.	
Ground Floor	2,240 "	"
Second Floor	2,240 "	"
Third Floor	2,240 "	"
Fourth Floor	2,240 "	"
Fifth Floor	2,240 "	"
Total	13,312 "	"
Total floor space		

Total floor area [illegible]

Total net floor space for designed rooms [illegible]

Total net floor space for training quarters (staff) [illegible]

Total net floor space for all square footage (including quarters) [illegible]

Floor space in the basement, in the space at supporting brackets the walls of the main building, has not been included.

(b) Non-Essential and Essential Allowance.

The total annual availability of the dwelling accommodation at the Service floor is 112 beds for women and one bed for attendants of the Service Clubs Service. The maximum availability of the area space is 112 beds for women and three beds for Service Clubs Service.

In addition, there is a [illegible] room on the ground floor which [illegible] for immediate but temporary period [illegible] in an emergency, and be treated as most [illegible] accommodation [illegible] space for attendants.

This would provide for from 20 to 22 additional patients, making the emergency capacity of the hospital 132 beds for women.

The hospital is supplied with beds which may be put up in the area of the main building. [illegible] a substantial [illegible] this manner.

On a normal basis, also the capacity of the Service [illegible] patients [illegible] of 112 beds and [illegible] 12 beds of one room.

In the basis of 22 patients in the Service [illegible], the floor space per patient would be 22 to 27 square feet and air space of 250 to 300 cubic feet.

(d) Medical Attention and Care.

The [illegible] Medical Officer to the Service for the [illegible] the fiscal year ending 1941, 1942 and also for the period from July 1 to December 31 for the [illegible] years 1939 and 1938.

Jan 1 to Dec 32

Number of type Surgical visits [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Major operations performed [illegible]	112.32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total [illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Number of [illegible]								
Number of [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Number of [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

On November 2, 1914, there were 100 patients in the hospital and 16 of these were chronics.

The hospital relief furnished was 19% greater in 1914 than in 1913 but 26% less than in 1909. From July 1, 1914 to October 31, 1914, it has been 82% greater than for the same period of the calendar year 1913. The falling off in patients during 1913 and 1914 is due to the fact that the hospital has been under reconstruction since February, 1912. In the fiscal year immediately preceeding, July 1, 1910, to July 1, 1911, the relief furnished was 45,541 days. The maximum daily number of patients during this period was 142. When the reconstructed building is fully in use, it is probable that the number of patients will be as great as formerly. The number of out-patients and the treatment given them is substantially the same as five years ago.

(34) Ambulance Service.

Service is now provided by a two-horse and a one-horse ambulance with horses owned by the hospital. Private service would cost $12.50 per round trip to New York and $8.00 for trips on Staten Island.

The Government, with its own equipment, pays hurry charges of $1.40 per trip to New York.

Number of trips during fiscal year 1914 to New York 60, on Staten Island 36.

Cost of storage for two horses and repairs to vehicles is given as $305.00-- during the last fiscal year.

The two-horse ambulance is in good condition, needing only minor repairs. The one-horse ambulance is old type and in fair condition. Horses are in good condition although one of them is 26 years old.

Under present conditions, it is believed desirable to continue the Government service. A motor driven ambulance is not required at this time. Present facilities are adequate.

(35) Heating, Power Plant and Ventilation.

The heating in building number 1 and 2 is by modern direct steam radiation supplied from a new plant in building number 1. Building number 5 is heated by hot air furnace which is inadequate but, as this building should be discontinued, nothing need be done to improve the plant.

Building 6 and 7 have local steam and hot water heating plants, each sufficient and in good condition.

Building number 8 is heated by a stove which is satisfactory for all needs.

The ventilation is by natural draft and through registers and windows in wards and by forced draft in operating suite, which is satisfactory and ample.

The present heating plant is adequate and satisfactory for all probable needs. Power, except for laundry engine, is not required unless a hydraulic hoist should be installed, in which case, the present boiler plant is adequate. An electric hoist for elevator is recommended.

Building number 1 now has hatchway for a passenger elevator but none has been provided but is sadly needed.

Dumbwaiter supplies the various serving kitchens and is satisfactory.

(36) Illumination.

In building number 1 the illumination is combination gas and electric, source of light from city plants. The lighting fixtures are of approved type and satisfactory. All other buildings on property are adequately lighted. There is no outside lighting system except oil lamps. An adequate underground electric system with ornamental iron poles should be installed.

Telephone wires are strung on trees and poles in front of the main building. These are unsightly and should be placed underground.

(37) Decoration.

Building number 1 has not been decorated and especial care should be exercised in selecting the colors to be used, as indicated in general report.

The decorations in the other buildings are satisfactory, except number 6 which should be superceded by a new building. Only enough should be spent on it to make it habitable, as the building is very old and not worth repairing. Confer with Mr. Fry for specifications.

(38) Telephone and Call Systems.

One city telephone is installed in main building with extensions to Pharmacist's quarters and Senior Surgeon's quarters.

There is an old intercommunicating telephone system which was installed in 1905. It is in bad condition and inadequate. A new automatic system to connect the various parts of the main building and the out-buildings is a necessity. About 27 stations are needed. Conduit is in place in the new building.

No provision has been made in the reconstruction of the building for installing a silent call system. Although a desirable improvement, its installation at this time is not recommended.

(39) Ice and Refrigeration Facilities.

The building is temporarily being supplied with a storage ice house for artificial ice which can be later converted into a refrigerating plant at a cost of approximately $2,500.00. A brine system of refrigeration should be installed.

(40) Water Supply and Fire Protection.

Water is supplied from 6" city mains in Brownell Street by 4" cast iron main entering main building at main entrance. Small branches lead to other buildings. Pressure on city main is 75 to 110 pounds. All water passes through meter and reducing valve which can be adjusted in case of fire to give full city pressure but takes time and the subjecting of plumbing fixtures to such high pressure is undesirable.

There two 2-way 2½ inch fire hydrants without steamer connection, one at the front of the building in the center and one in the rear at the north end.

The source of the city supply is driven wells. The water is palatable but hard. The supply is ample.

The main building is equipped with three hose racks and 75 feet of 2 inch linen hose in the basement and on each floor. Standpipes are 2½ inches. There are no hose racks in any of the other buildings.

There are two wheel hose reels equipped with 200 and 300 feet of 2½ inch fire hose.

Eighteen chemical fire extinguishers, 3 gallon Underwriter type, are distributed among the various buildings.

The outside fire system should be arranged so that fire hydrants are at all times on city pressure. The reduced pressure 50 to 60 pounds will be adequate for the fire hose within the buildings.

The two old hydrants now installed should be abandoned and new 4 inch cast iron mains laid so as to provide a total of four 2-way fire hydrants with additional steamer connections and located two on the front and two in the rear of the main building.

One hose rack with 50 feet of hose (2 inch linen) should be installed in laundry building and connected to piping now in place.

Four additional fire extinguishers are needed to provide, with the 18 now on hand, one for each set of quarters outside of main building (3), one in each set of quarters in main building (3), three in each basement, second and third floors of main building (9), 2 each in second and fourth stories of main building (4), one in laundry (1) and two in White House (2).

Facilities are in good condition and, with the exceptions noted are adequate. Fire drills are held weekly. Within a short time Staten Island will be connected with the water supply of New York City, with a consequent improvement in the character of the water furnished.

(41) Fire Alarm System.

The station has a large bell in rear of main building which is struck by hand.

Although an electric alarm system is desirable and could have easily been provided when the building was being reconstructed, its installation at the present time would involve the tearing out of completed work and it is not, therefore, recommended.

City fire engine house is located one block away from reservation.

(42) Sewer and Other Drainage.

Sewerage is taken care of in a combined system, discharging into the sea in front of Bay Street. A brick sewer runs from manhole in front of the main building, thence to and across Bay Street to manhole, thence a cast iron pipe under railroad tracks and manhole on shore continuing with cast iron pipe to deep water.

The brick sewer is about 2 feet x 3 feet. The sewers from the different buildings tap this trunk sewer at various points. This system is used for the hospital reservation only.

Surface water drainage enters this main sewer through a drain opposite the Surgeon's quarters. The system is in good condition and adequate. There are two privies which should be removed.

(43) Streets, Roads, Walks, Fences and Grounds.

There is a semi-macadam and gravel road from main entrance on Bay Street to and around main building with branches from the main building to Surgeon's quarters and Assistant Surgeon's quarters.

The roads in general are in bad condition, due largely to rebuilding operations. The road from main building to Assistant Surgeon's quarters is nothing more than a path and the road to the Surgeon's quarters is too narrow.

Improvements are needed as follows:
Resurface and reconstruct above roads, including a new road to Assistant Surgeon's quarters. Widen to a minimum width of 16 feet between gutters where practicable (present width 12 feet). Pave with brick the area in the rear of building at least over coal storage place.

The entrance from Bay Street should be widened and regraded to provide for 16 foot street, gutters and a 4 foot sidewalk.

A narrow gravel and cinder roadway leads from rear of main building to old three story building (White House) partly utilized as stable.

While this roadway is not a satisfactory permanent improvement, it will serve the purpose for the present. When the new stable, recommended in paragraph (1), is constructed, a new roadway should be provided.

There is a 3½ foot flag walk from rear of main building to old building (White House) at back of reservation. In good condition and adequate. There is a brick walk from Assistant Surgeon's quarters to road from main entrance, in good condition and adequate.

All other sidewalks are old stone flag walks, narrow, in bad condition and inadequate.

New cement walks of adequate width should be constructed from main entrance to and around main building with projections to finish up against building where grass plots are undesirable; from main building to Surgeon's quarters, from main building to Assistant Surgeon's quarters and a brick walk from Surgeon's quarters to main roadway.

These improvements will necessitate widening the main entrance and roadway, the moving of gate house and grading down of banks on sides of roadway to provide for increased width.

The portion of the sidewalk on Bay Street outside the fence destroyed by the widening will have to be replaced.

The east boundary along Bay Street has an ornamental iron fence in good condition. The south boundary has a woven wire fence in good condition.

The west boundary has a tight wood fence in fair condition but needs painting.

The north boundary has a series of dilapidated wooden fences in bad condition. An entire new fence is required.

The main entrance on Bay Street has ornamental iron gates. The widening of this entrance recommended will necessitate new gates and a general repainting of fence.

The general appearance of the grounds is not pleasing, due to rebuilding operations.

On the completion of the hospital, the work previously described should be carried out and the area about the building restored to a presentable appearance. The entire grass slope from the main building to Bay Street has never been properly graded and surfaced. It should be plowed up and uniformly graded to make embankments as near as practicable of equal height on each side of main drive, providing for proper surface drainage away from the officers' quarters. Several of the old trees on the reservation are in bad condition. They were recently examined by tree experts and those which it was thought could be saved have been treated. Dead trees should be removed and new shade trees should be set out, when grounds are put in condition.

(44) Wharves, Sea Walls, Etc.

None. No waterfront.

(45) Live Stock, Vehicles, Etc.

The station possesses two horses in good condition and two ambulances, one for one horse and the other for two. The one horse ambulance is old and in fair condition. The two horse ambulance is in good condi-

tion except for general repairs and is adequate.

There are also one farm wagon, one horse lawn mower, one cultivator and one push cart. The lawn mower is worn out and a new one is needed. Additional hand lawn mowers are also required.

(46) Personnel.

On duty at this station there are the following officers:- one Senior Surgeon, one Surgeon not assigned to hospital work (Issues sanitary statements to vessels leaving the port of New York), one Passed Assistant Surgeon on duty at the hospital, two Assistant Surgeons (one on duty in the out-patient office in the city), two Interns and one Senior Pharmacist.

Thirty attendants are employed and are classed as follows:- 1 engineer, 1 chief cook, 1 clerk, 1 city office attendant, 1 fireman, first laundryman, 1 carpenter, 1 watchman, 1 second cook, 9 nurses, 1 third cook, 2 pantrymen, 1 gardener, 1 driver, 1 second laundryman, 4 for general work, 1 gate keeper and 1 druggist.

The above named staff is considered sufficient for the proper conduct of the hospital but an extra man is needed as a painter.

(47) Records.

The hospital records, including the clinical records, are kept in a proper manner and up to date.

(48) Books.

The medical books in the station library are with few exceptions old and out of date.

(49) Purchase of Supplies.

Supplies are purchased on yearly contract with best dealers after advertisement and solicitations and the results are considered satisfactory. Daily deliveries of kitchen supplies are made and few articles are kept in the subsistence storerooms.

The opinion of those in charge of the station is that no particular advantage would result from proposals for supplies accepted at intervals of three months or purchase in the open market.

APPENDIX A

Marine Hospital at Stapleton, N. Y.

Appropriation for Repairs & Preservation of Public Buildings.

* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
III-8	Minor plaster repairs and plaster painting. Repairs to wood trim.	$300.00
II- 6	Two smoking rooms on veranda, Building No. 1.	1500.00
28	Enlarging door for necropsy room.	25.00
14	Repairs to roof and new windows in present disinfecting room.	140.00
27	Padding one room in basement of No. 1 for insane.	160.00
37	Temporary repainting walls of Building No. 6.	200.00
	Minor repairs to interior trim of Building No. 6.	100.00
37	Painting all plaster work in Building No. 1.	3500.00
39	Preparing present room for refrigerating machinery	200.00
38	Intercommunicating telephone system.	2500.00
42	Resurfacing and reconstructing roads, widening approach from Bay Street, grading and improving grounds, constructing pavements and fences.	10000.00
40	Provide 4 new hydrants, new 4" mains, one hose rack in laundry and 4 chemical fire extinguishers.	900.00
	T O T A L - - - -	$19,525.00

[illegible]

"Under Supervisi of Engineering B. 1.

Allotment-Order for Equipping & Improvement of Public Buildings.
* *

Public Buildings Commission are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	Item	Estimated Cost.
III-5	Minor plumber repairs and plumber painting. Painting in wood cts.	[illegible]
III-6	Two heating stoves on veranda, Building No. 1.	[illegible]
33	Swinging door for scenery room.	25.00
34	Repairs to wood and new columns in present storage building room.	[illegible]
35	Painting new room in basement of No. 1 for laundry.	[illegible]
37	Temporary connecting walls of Building No. 6. Minor repairs to interior trim of Building No. 6.	[illegible]
38	Necessary cell plumber work in Building No. 1.	[illegible]
41	Temporary repairs from the Philippine Exposition [illegible]	[illegible]
42	Interconnecting telephone systems.	[illegible]
43	Shoemaking and repairing room, painting interior, [illegible] from Day School, Printing and Industrial [illegible] Assembly and Dance.	[illegible]
44	Finishing 4 gas generators, one of galvy. and brass [illegible] to priority and a somewhat like [illegible]	[illegible]
	* * * * * * * * * * * * * * *	[illegible]

APPENDIX B

Marine Hospital at Stapleton, N.Y.

Appropriation for Mechanical & Electrical Equipment.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
38	Floor drain, cesspool and sink for new necropsy room.	$50.00
39	Refrigerating machinery in Building No. 1, space prepared.	3000.00
36	Electric street lighting system, underground wires, and placing telephone wires underground.	1500.00
35	New elevator for building No. 1 (shaft ready for elevator and car)	3500.00
	T O T A L - - - - - -	$8,050.00

APPENDIX I

Navy Department in Washington, D.C.

A.Corporation for Development & Electrical Equipment.
* *

Utility electrical laboratory was by the order of large volumes to-
gether and small in quantities quantity.

Number of report.	Item	Total cost.
48	Power distribution equipment and main low voltage laboratory room.	[illegible]
49	Substation equipment in Building No. 1, study equipment.	[illegible]
50	Electric arcing lighting system, electrical shop, and power distribution where required.	[illegible]
51	The elevator for Building No. 3 (study room) for elevator and hoist.	4820.00

APPENDIX C

Marine Hospital at Stapleton, N.Y.

New Construction.
* * * * * * * *

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report	ITEMS	Estimated Cost
1	Surgeon's residence.	$10,000.00
17	New laundry building and equipment, carpenter and paint shop.	9,000.00
1	New Barn.	5,000.00
29	Hospital (Leanto type)	5,000.00
	T O T A L - - - - - -	$29,000.00

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

APPENDIX D

Marine Hospital at Stapleton, N. Y.

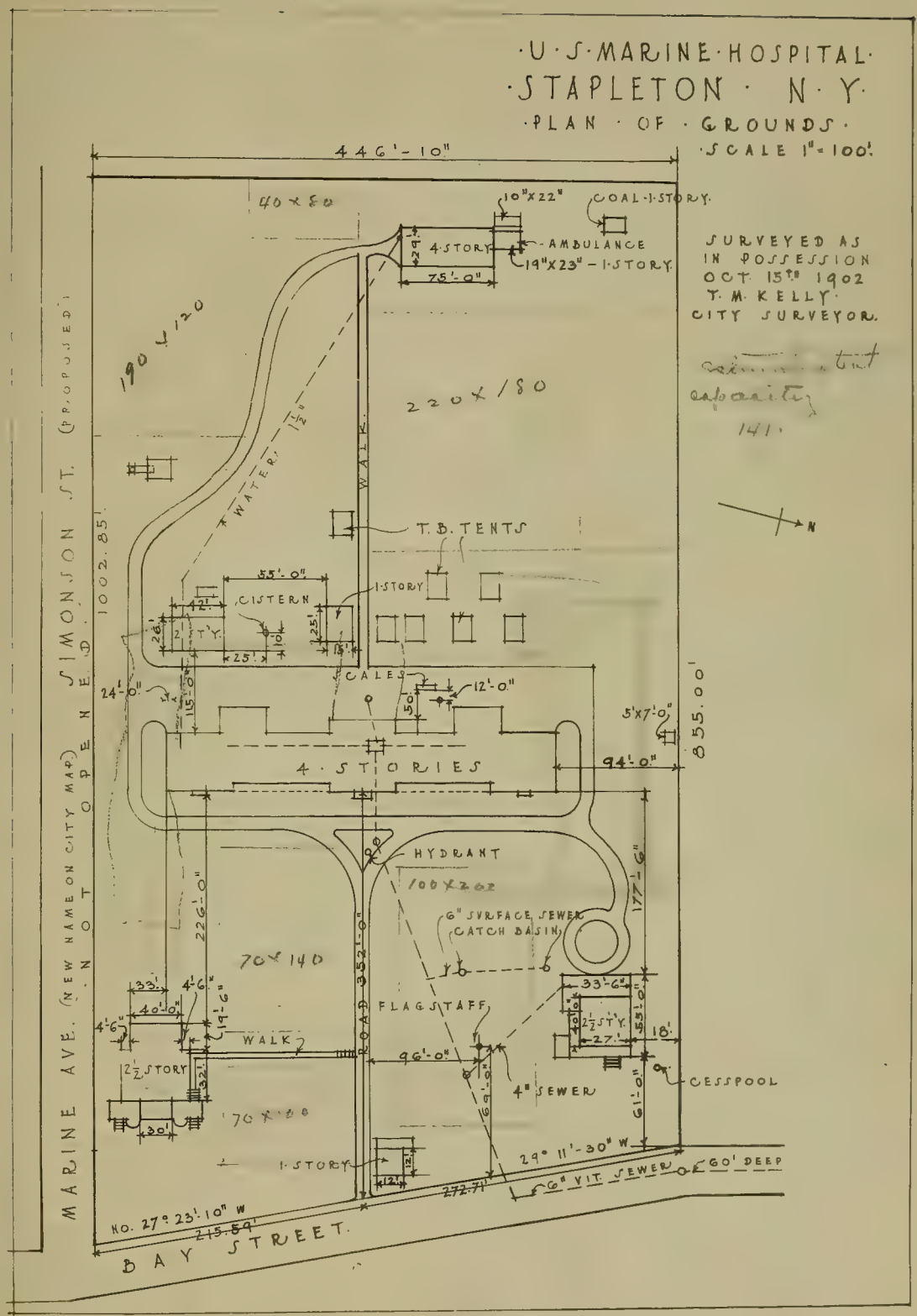
Administrative Equipment.
* * * * * * * * * *

ADMINISTRATIVE equipment required.

(See administrative sheet attached)

Paragraph of report.	ITEMS	Estimated Cost.
30	Miscellaneous (portable bath tubs)	$193.00
30	Office (out-patient)	500.00
2	Offices (Hospital)	1550.00
22	Wards	16839.00
18	Operating room	6683.00
18	Surgical dressing room	191.00
4	Examining room	87.00
20	Laboratory	1488.00
19	X-Ray room	2492.00
5	Kitchen	5886.00
10	Dining room	1516.00
17	Laundry (new equipment)	10000.00
8	Officers' quarters	1000.00
9	Attendants' quarters	920.00
15	New incinerator	350.00
45	Lawn mowers	150.00
	T O T A L - - - - - -	$49,845.00

46 Personnel, one extra attendant (painter) per month, $30.00


·U·S·MARINE·HOSPITAL·
·STAPLETON · N·Y·
·PLAN · OF · GROUNDS·
·SCALE 1"=100'.
446'-10"
40 x 80
10"x22"
COAL·1·STORY.
4·STORY
AMBULANCE
19"x23" - 1·STORY.
75'-0"
SURVEYED AS
IN POSSESSION
OCT. 15TH 1902
T. M. KELLY·
CITY SURVEYOR.
190 x 120
220 x 180
WATER
WALK
T.B. TENTS
1·STORY
55'-0"
42'
CISTERN
T'Y.
25'
15'
SCALES
12'-0"
24'-0"
15'-0"
5'x7'-0"
855.00'
1002.85'
4·STORIES
94'-0"
HYDRANT
100 x 202
6" SURFACE SEWER
CATCH BASIN
177'-6"
226'-0"
70 x 140
352'-0"
33'
4'-6"
40'-0"
19'-6"
FLAGSTAFF
33'-6"
2½ ST'Y.
55'-0"
27'
18'
WALK
96'-0"
2½ STORY
32'
4" SEWER
CESSPOOL
61'-0"
30'
70 x 88
1·STORY
12'
29° 11'-30" W
272.71'
6" VIT. SEWER
60' DEEP
NO. 27° 23'-10" W
215.59'
BAY STREET.
MARINE AVE. (NEW NAME ON CITY MAP)
SIMONSON ST. (PROPOSED)
NOT OPENED.

VIEWS OF U·S·MARINE·HOSPITAL

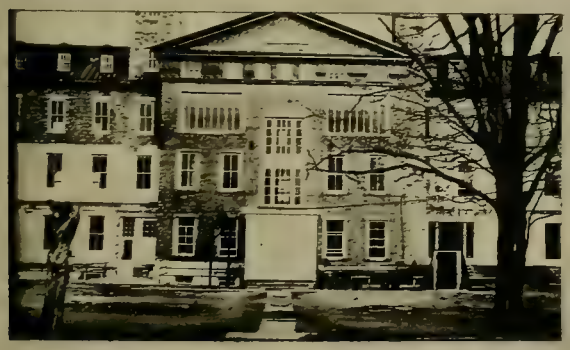
·STAPLETON·N·Y·

·MAIN·BUILDING·FRONT·

·MAIN·BUILDING·END·&·FRONT·

·MAIN·BUILDING·REAR·

·MAIN·BUILDING·REAR·



·MAIN·BUILDING·REAR·

·MAIN·ENTRANCE·GATE·

·SHOWING·ROAD·CONDITION·

·DRIVE·TO·OFFICERS·QUARTERS·

·U·S·MARINE·HOSPITAL·

·STAPLETON · N·Y·

·SURGEON'S·RESIDENCE·FRONT·

·SURGEON'S·RESIDENCE·SIDE·

·JR·OFFICER'S·QUARTERS·FRONT·

·JR·OFFICER'S·QUARTERS·SIDE·

·BARN·&·ATTENDANT'S·QUARTERS·

·CARRIAGE·HOUSE·

·LAUNDRY·REAR·

·LAUNDRY·FRONT·

U·S·MARINE·HOSPITAL·

·STAPLETON · N·Y·

·REAR·OF·B'LD'G·No·1· CLOSE VIEW·

·REAR·OF·B'LD'G. No·1·CLOSE·VIEW·

·REAR·OF·BUILDING·No·1·CLOSE·VIEW·

·REAR·OF·BUILDING·No·1·CLOSE·VIEW·

·LAUNDRY·AND·NECROPSY·

·OUT·HOUSE·

JTC

September 22, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 20, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at New York, N. Y., except in my opinion a garage should be built instead of a stable. A motor ambulance can be purchased for $700.00 . Its cost of maintenance will be no more than the horse-drawn ambulance while its efficiency will be much greater.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

REPORT ON THE PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

VINEYARD HAVEN, MASS.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

H. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.H.

A. L. PARSONS,
Civil Engineer, U. S. N.

GENERAL INDEX

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

Report of inspection made October, 1914, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The reservation is delightfully situated on an elevated plateau on the southeast side of the harbor of Vineyard Haven and commands an extensive view of Vineyard Haven, the harbor, Vineyard Sound, the mainland, Eastville, Oak Bluffs, the Highlands and the Lagoon. It has a gentle slope toward the harbor and is terraced on the front facing it. The grounds are well sodded, have a few trees and shrubs and its elevated position secures a maximum of fresh air and sunshine. A substantial cement stairway leads up the front of the terrace and there is a good asphalt road leading up the east side and entirely around the building.

The reservation comprises about five acres and is sufficient for present and future needs, but a small piece of land on the western side of the reservation 70 x 185 feet should be purchased in order to make the general form of the reservation quadrilateral.

(2) History.

A marine hospital was built at Eastville on the east side of the harbor by the residents of Vineyard Haven, on the authority of the General Court of Massachusetts, in 1798. This was the second marine hospital built in the United States; the first having been built by the State authorities of Virginia at Norfolk in 1788.

In 1826 the hospital built at Eastville was abandoned and there was a reversion to the old system of boarding out the patients under the charge of a local physician.

In 1879 an abandoned lighthouse with a strip of land 50 x 380 feet on the southeast side of the harbor was secured by the Marine Hospital Service and converted into a hospital for the relief of seamen. This was opened for the reception of patients on November 28, 1879. This building was imperfect in design and equipment, but served the purpose for a hospital for many years. In August, 1885, a new pavilion ward was added to this building.

On March 3, 1889, Congress appropriated $1,250.00 for the purchase of additional adjoining land for the use of the Service, and four acres and eighteen square rods was purchased from Mr. E. Sparrow of Mattapoisett, Mass., on June 7, 1892.

On March 4, 1891, Congress had appropriated $20,000.00 for the erection of a new hospital. The construction of the new hospital was begun on December 16, 1894. It was completed in October, 1895, and furnished and opened for the reception of patients on December 20, 1895.

Report of Naval Station, Norfolk, Va., on recommendations to be placed in the Journal.

I.

GENERAL RECOMMENDATIONS.

(1) Equipment.

The requirements in individuality which have so marked the history of the military life at the Navy of Norfolk Navy and Marines as also the view of Congress Bunch, the Navy, Treasury Bunch, the Marine Corps, the Navy, the Marine and the Navy. It has a public office, provide the Navy and is between on the land Bunch is. The problems are well marked, there is far beyond the Bunch but the elevated problems because a million of financial and questions. A professional number of officers been on the Congress the Bunch and there the Bunch equipment when having on the Bunch with are actually around the Marine.

The measurements problem about this Navy can be mitigated for present and future needs, but a small change at land on the Navy also in the structure of it but that should be provided in order to make the Naval form of the reorganization qualified.

(2) Quarters.

A medical hospital was built at Norfolk on the most site of the Bunch by the predecessor of Navy Bunch, on the direction of the General Board of Navy, in 1900. This was the second Medical Hospital built in the United States, the first being built by the Bunch Navy of Virginia at Norfolk in 1903.

In 1907 the material built is fortified and dismantled but there are properties in the old grounds of Naval Hospital and the property under the action as a Naval Hospital.

In 1907 an elevated [illegible] with a [illegible] of land in 1908 land in the [illegible] of the Navy was erected by the Navy Department [illegible] and [illegible] Bunch to [illegible] Navy. This was [illegible] for the reception of patients on Saturday [illegible]. This building was supported by [illegible] and [illegible], but after the passing the [illegible] all for land [illegible]. In [illegible], 1908, a new pavilion was erected on the Hospital.

On March 2, 1910, Congress appropriated $1,000,000 for the permanent [illegible] hospital [illegible] for the Navy on at the Station, the Navy Department [illegible] Navy, on June 7, 1910.

In June 4, 1910, Congress had appropriated $50,000 for the [illegible] of a new Station. The [illegible] of the new Hospital was begun on November 1, 1910. It was occupied on March, 1911, and [illegible] [illegible] for the reception of patients on Saturday [illegible].

65

(3) Need for a Marine Hospital.

As relief has been provided for sick and disabled seamen at Vineyard Haven since 1798, in all probability the demand for it will not cease and the maintenace of a hospital here is a just and humane provision to care for a class, the wards of the Government, and for whom the municipalities make no provision.

As far as can be foreseen the present plant will always be required as it is a midway, and in a sense, a hospital refuge station between New York and Boston and is convenient to the large amount of shipping that passes through Vineyard Sound.

(4) Adequacy of Plant.

The capacity of the present hospital is ample, except for isolation facilities, so far as can be foreseen for some time to come. Although the hospital relief furnished is increasing moderately, the normal capacity of the hospital is now 35, while the largest daily number care for in 1914 was 21. In an emergency as many as 32 patients can be cared for, not counting the two beds in the isolation building. Certain minor improvements are needed in the present plant and additional facilities should be provided for tubercular patients and infected cases. These are described in detail under section III.

(5) Acquisition or disposal of Land.

The entire reservation is in use and none of the land can advantageously be disposed of.

There is a small tract in the southwest corner of the area inclosed by hospital fence, which is private property belonging to H. N. Hinckley, Vineyard Haven. Area, about 13,000 square feet. This land can be secured at a reasonable price and should be purchased. There is in addition ample land adjacent to the reservation which could be purchased at small cost if the needs of the hospital should ever require it.

(6) Future development or disposal of Plant.

A marine hospital will in all probability always be required at this point and the present plant should not be disposed of. If the needs of the station should demand it, the present capacity of the hospital can be doubled by extending each wing of the main building to provide for 12 patients in each ward instead of six as at present. Verandas should be built on the south side of the wards, as well as on the north.

Each ward is now provided with toilet rooms which can be readily increased in size and equipment to meet the needs of the larger wards. Combined recreation rooms and solaria should be provided at the end of each ward. These changes would meet all probable contingencies of possible growth.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings

(for details see appendix A)

Total estimated cost of work recommended, $1100.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings (for details see appendix B)

Total estimated cost of work recommended, $85.00

(3) Legislative Appropriation for New Construction (for details see appendix C)

Total estimated cost of work recommended, $4000.00

(4) Appropriations for Administrative Equipment (for details see appendix D)

Total estimated cost of items recommended, $3357.00

Total, $7442.00

(5) Personnel.

One additional attendant is needed for general work about the grounds.

III.

DESCRIPTION OF PLANT, IMMEDIATE IMPROVEMENTS RECOMMENDED AND ESTIMATES.

(1) Buildings in general.

Building No. 1. Main Hospital Building, Two story, wood frame, Basement and attic; Clapboard exterior, Shingle roof. Pine trim painted. Plaster walls and ceilings, painted. 3¼ inch D & M hard pine floors first and second stories, 6 inch D & M pine in attic, Cement floors in basement. Attic unfinished. Steam Heat, Electric light, condition good. Chandeliers needed. Partition in operating room should be restored. Partition in disinfecting room should be built. Floor area - 16,320 square feet.

Building No. 2. Attendants Quarters: 1-½ story wood frame on brick foundation. Clapboard exterior, Shingle roof. 3½ inch D & M pine floors painted, Plaster walls and ceilings, painted; Stove heat, electric lights. Very old building but in fair condition. Floor area - 1,528 square feet.

Building No. 3. Isolation Hospital: One story, wood frame, on brick foundation, clapboard exterior, Shingle roof. 3½ inch D & M pine floors painted, Plaster walls and ceilings, Painted, Fair condition, Stove heat, Oil lights, This building should be replaced with a four room building for Isolation and tubercular patients, of the Navy Hospital Lanto type, cost $4000.00, immediate improvements needed: Extend present wiring system and install drop lights. cost $35.00. Floor area - 350 square feet.

Building No. 4. Unserviceable Property & Hose House: One story wood frame, on brick piers, Clapboard exterior, Shingle roof. 3½inch D & M Floors, No interior trim of paint. Condition good. Floor area - 250 square feet.

All buildings present a neat and well kept appearance, with the indication that this is the rule rather than a special condition.

[illegible]

(2) Offices.

There is a surgeon's and a pharmacist's office located on the first floor, on each side of the entrance hall of the main building. The pharmacist's office also serves, in part, as a waiting room for visitors. They are comfortably furnished and a sectional bookcase is the only article needed.

(3) Visitor's Reception Room.

There is no proper visitor's reception room. The pharmacist's office and a room at the end of the east ward are used for such purposes. There is no space for such a room and none is needed under present conditions.

(4) Examining Room.

There is no special room, and the surgical dressing room is used for such purposes. No special room is needed, as the present arrangement is sufficient for the requirements of the station.

(5) Kitchen.

The kitchen is a large room, located in the extension at the back of the main building. It has a good range, table and sink, and a fair stock of kitchen utensils.

(6) Pantry and Food Storage.

There are two pantries placed between the kitchen and dining room, provided with swinging doors, and one adjoining the kitchen, which are used for kitchen storage purposes. They are ample and sufficient for present needs.

(7) Storerooms.

There is a storeroom adjoining the dispensary on the first floor, across the hall, and one in the basement under the kitchen, and an additional room has recently been provided by excavation and finishing the basement under the west yard. They are ample for all purposes.

(8) Quarters for Officers.

The only quarters for officers at this station are those provided for the pharmacist. They are located in the second story of the building and consist of a sitting, dining, bedroom, kitchen, toilet and small hall room. They are comfortable and sufficiently furnished.

(9) Quarters for Attendants.

Two attendants are lodged on the second floor of the main building, the day nurse in a room at the end of the upper east ward and the clerk in the bed room attached to the pharmacist's quarters.

Five attendants are lodged in the attendants' building at the rear of the reservation. They each have a separate room, adequately furnished, and the building is heated by a hot-water heater.

(10) Patients' Dining Room.

The patients take their meals in the general dining room, adjoining the kitchen, in the extension to the main building. Some new equipment is needed here, such as iron stone china, to replace defaced granite ware; knives, forks, spoons and table linen.

(11) Interns's and Officers' Dining Room.

There is no interns' and officers' dining room and none is required.

(12) Attendants' Dining Room.

There is no special room for this purpose and the attendants taket their meals in the general dining room at a separate table and at a different time from that of the patients. This arrangement is not objectionable and at present a special room is not required.

(13) Recreation and Smoking Room.

A smoking room on the first floor across the hall from the pharmacist's office and between the east and west wards serves as a combined recreation and smoking room and is adequate for present needs. Linoleum is needed for the floor of this room.

(14) Disinfecting Facilities.

There is a Kinyoun-Francis steam disinfector with formaldehyde and ammonia attachment and has separate clean and dirty rooms, ample for all probable needs. The soiled end room should be separated from the general passageway to the storeroom and clean end room with a door for convenience in starting steam in the boiler for the disinfector, and an outside entrance for the admission of soiled materials. Estimated cost, $300.00.

(15) Incinerators.

None, and none needed at present, as all garbage is removed gratuitously and bandages, etc., are burned in the heating or disinfector boiler furnaces.

(16) Disposal of soiled linen.

Is carried from the different wards and rooms to the laundry in the basement in sanitary hampers, and linen that has been exposed to infection is soaked in a 20% solution of carbolic acid, then immersed in boiling water and put through the usual laundry process. Badly soiled and infected linen is burned. Laundry lists accompany each consignment of linen, which is checked when entering and leaving the laundry.

(17) Laundry Facilities.

The Laundry is located in the basement of the main building, under the surgeon's office, and contains ample equipment except a drying room which should be built in this room. Drying room should be about 6 feet by 10 feet long, steam heated from low-pressure boiler which is adequate. There is no machinery and none is needed.

(18) Operating and Surgical Dressing Room Facilities.

The operating room with its existing facilities is sufficient for the needs of this small station, and an extensive expansion of rooms for this purpose is not required. Some more instruments are needed to keep the present equipment up to a modern standard.

The surgical dressing room is ample for present needs and requires, in equipment, a case for dressings. This room and the dispensary are in the same room, which is an objectionable feature. A partition, which formerly existed between these rooms and which was removed some years ago, should be restored and the room again divided into a dispensary and dressing room.

(19) X-Ray Facilities.

There is no X-ray outfit at this station and as there is none on the island available, a portable Xray apparatus such as that made by the Western X-ray Coil Company of Chicago should be purchased. This has X-ray cautery, small electric light, high frequency and D'Arsonval currents; can be attached to any of the electric light fixtures, and carried from room to room when desired. Estimated cost for a complete outfit, $349.20.

(20) Laboratory.

There is no laboratory. A corner of the dispensary is fitted with small shelves and a small counter, and here is kept an outfit of stains and reagents. There is a microscope, centrifuge, albuminometer, urometer, tubes, etc., and the outfit is sufficient for ordinary clinical purposes, exclusive of culture work, Wasserman, etc.

(21) Dispensary.

The dispensary is located at one side of the room used in common with the surgical dressing room. It has sufficient equipment for ordinary purposes but has only plain wood shelves for the reception of the dispensing bottles. This should be replaced by a dispensing case of the closed and revolving type, and an apparatus for distilling water is also needed for use in intravenous work. Both can be furnished for the sum of $255.00.

(22) Wards for Women.

First floor. There are two wards on this floor, of six bed normal capacity each. Each ward has separate toilet facilities.

Second floor. There are two wards directly over wards on first floor, of same capacity and arrangement.

A room for nurses' office is adjacent to the east wall on first floor. One attendant is quartered in a similar room on second floor.

Wards have window on sides and are light and airy, with six verandas on north side.

Tubercular Wards. There is no space in main building set aside for this purpose. When there are cases which cannot be sent to other marine hospitals, they must be quartered in isolation building where there is one room with two beds for all classes of patients. A new building should be constructed as described under "Isolation Facilities", section 42.

(23) Quiet Ward.

There is no room set aside for this purpose. The room on first floor used as an office for the nurse can be utilized when required. Present facilities, adequate.

(24) Ward for Revenue Cutter Officers.

One room on second floor is reserved for this purpose. It will accommodate one officer and is adequate.

(25) Toilet Facilities.

The present toilet facilities are adequate for all purposes. One bowl in lavatory, first floor, west wing, is cracked and should be replaced.

(26) Portable Tubs.

There is a good enameled portable tub in the station, but it has no rack for lowering and raising a patient when immersion is necessary. If a rack could be fitted on this bath, the outfit would be sufficient for the present needs.

(27) Padded cells.

There is no special room for the confinement of violent alcoholic or insane cases. There is a restraint sheet and a Humane restraint apparatus on hand at the hospital. Cases requiring it can be transferred to the Government Hospital for the insane at Washington, D. C., or to one of the State Asylums on the mainland.

(28) Necropsy Facilities.

One small room in the isolation building is used for this purpose. It is provided with a sink, running water and drainage and a postmortem table. The table is a rude home-made affair and should be replaced by a suitable one. This room is heated in winter by a small coal burning stove.

(29) Isolation Facilities.

A wooden building 15' x 25' in southeast corner of reservation com-

tains in one end isolationward 14' x 14' for two patients. The other end is used as a necropsy room. Tubercular patients too ill to send to other marine hospitals are quartered here as well as infectious cases. The facilities furnished are not adequate. A new building should be erected on the approximate site of the present building, with two separate wards of six beds each, one for tubercular patients and one for infectious cases, the latter being subdivided into two rooms. A veranda should be provided on the south side.

The present isolation building should be moved north and utilized for necropsy purposes and storage of yard tools, etc.

(30) Out-patient Office.

There is no downtown out-patient office. As the hospital is but a short distance from the harbor, patients desiring out-patient treatment apply at the office at the hospital and are there attended to. No special outfit is required, as the dispensary and surgical dressing room are available for this class of patients.

(31) Floor Space.

Total net floor space of main building and annex.

Net floor space,	Basement	3910	sq. ft.
"	First floor	3660	"
"	Second floor	2520	"
		10090	"
	Total hall space	1500	"
	Total	11590	"

Total net floor space for hospital uses.....	77%
" " " " " living quarters (except hall space)	10%
" " " " " halls (including quarters)	13%
	100%

(32) Bed Capacity and Space Allowed.

The total normal capacity of the hospital proper is 24 beds for seamen and one bed for officers of the Revenue Cutter Service. In an emergency 32 seamen and one officer can be accomodated.

On a normal basis each patient has 77 square feet of floor space and 900 cubic feet of air space. Two patients can be accommodated in the isolation building.

(33) Relief afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914, and also for the period from July 1 to

October 28, for the calendar years 1913 and 1914.

	1909	1913	1914	Jul 1. to Oct 28 1913	Jul 1. to Oct 28 1914
No. days hospital relief furnished,	3585	3586	4301	1175	1511
Daily average hospital patients,	9.82	9.82	11.50	--	--
Total daily cost per hospital patient,	--	3.72	3.08	--	--
Number of hospital patients,	83	110	93	--	--
" " out-patients,	172	140	182	--	--
" " times treated,	184	148	220	--	--

On October 28, 1914, there were twelve patients in the hospital and three of these were chronic.

The hospital relief furnished was 17% greater in 1914 than in 1913 and 17% greater than in 1909. From July 1 to October 28, 1914, it has been has been 29% greater than for the same period in the calendar year of 1913.

The number of out-patients and treatments given them in 1914 has been slightly greater than in 1909 and 30% greater than in 1913.

(34) Ambulance Service.

The station has one two-horse ambulance kept in stable in the town. The services of driver and team are obtained under contract for $1[illegible].00 per month, irrespective of service rendered. Present arrangement satisfactory.

(35) Heating, Power Plant, and Ventilation.

There is no power plant at present and none needed, as individual heating units are adequate and satisfactory so far as installed. It is not probable that this station will ever be sufficiently enlarged to justify a central heating or power plant.

The present low-pressure direct steam radiation heating system is satisfactory and adequate for all probable needs.

Ventilation. By registers located in all principal rooms connected to vent ducts through the roof; furnish suitable and adequate ventilation.

(36) Illumination.

The building is lighted by electricity, by means of single drop lights in various rooms, halls, etc. The wiring in the main building is concealed between floors, on porcelain insulators. The drop cords should be changed to fixtures, to be located in place of the abandoned gas fixtures, still in place, and proper shades provided, especially in wards. The present number of fixtures is somewhat inadequate, but this can be remedied by providing more outlets on the fixtures. Estimated number of fixtures for main building, - 18 of from one to four lights each. Estimated cost, - $300.00. The service is 110 volt direct current and is supplied from a local plant.

supplied from a local plant.

(37) Decoration.

The entire interior and exterior surfaces of all buildings have been recently decorated, in a very satisfactory manner.

(38) Telephone and Call Systems.

There is no intercommunicating system other than an old and unused speaking tube equipment in main building. Call bells to various parts of the building connect with surgeon's offices.

One city telephone in pharmacist's office connects with Vineyard Haven Exchange. There is no silent call system and none is needed. Present facilities are adequate.

(39) Ice and Refrigeration Facilities.

None at present and none needed, artificial ice is supplied daily and is considered safe and satisfactory for present and probable future needs.

(40) Water Supply and Fire Protection.

Water is obtained from Vineyard Haven system. The supply is of good quality and adequate. A three-inch main extends from southwest corner of reservation to near main building, with 1" branches to attendants' quarters and isolation building. City main at station boundary is 6". There is one two-way, 2½" hose connection fire hydrant in rear of main building. Pressure is 35 pounds normally. There are two wheel hose reels in hose house in rear of main building. Each reel is equipped with 150 feet of 2½" hose. There are no hose reels in any of the buildings. There are seven fire extinguishers, 3 gallon Underwriter type, six in the main building and one each in isolation building and attendants' quarters.

The town of Vineyard Haven has no fire engine, but possesses local fire depot. In case of fire, stand pipe is shut off and direct pump pressure put on mains.

There are several hand grenades about the buildings.

There are two steel fire escapes to each ward.

The present three-inch line to hydrant should be replaced by four-inch and extended to the front of the main building, and one additional two-way hydrant provided.

A three-inch stand pipe should be installed in hallway of main building and extended to attic. Provide hose reels in basement, first and second floors and attic, each equipped with 50 feet of 1½" linene hose and nozzle.

One hose rack and 50 feet of hose should be installed in attendants' quarters with 2" pipe line to main.

(41) Fire Alarm System.

(17) [illegible]

[illegible] [illegible] [illegible] [

Station has a bell on which fire signals are sounded by hand. Fire drills are held weekly. There is a station fire bell. Facilities adequate.

(42) Sewer and other drainage.

Sewerage from buildings is discharged into two cesspools, one for main building and one for isolation building and attendants' buildings.

Storm water is discharged onto ground.

Facilities are adequate.

(43) Streets, Roads, Walks, Fences and Grounds.

A tar and gravel concrete driveway leads from carriage entrance to and around building. It is in excellent condition. The approach to this driveway at the main gate is badly washed. The tar and gravel concrete should be extended across the road a distance of 30 feet.

A concrete walk and steps lead from main entrance, upper terrace where it joins a brick walk, extending to entrance of main building. In good condition and adequate.

The reservation is inclosed by wood posts and wire-strand fence. Posts in good condition. Wire will need renewal in a few years.

The grounds are well kept and the appearance is excellent. A small cemetery about two miles from the reservation is in good condition.

(44) Wharves, Sea Walls, etc.

None and none are required.

(45) Livestock, Vehicles, etc.

There is no livestock or vehicles except one ambulance. Horse and driver are secured by contract. Facilities adequate.

(46) Personnel.

At present there is one medical officer in charge, no pharmacist, one engineer, one clerk, two cooks, one day and one night nurse and watchman, one messenger and one laundryman. On account of the large grounds to be taken care of in the summer and the amount of general cleaning to be done about the buildings to keep them in good order, one additional attendant is needed.

(47) Records.

The records of the station are properly kept, including the clinical records.

(48) Books.

The majority of the medical books in the station are old and not

up to date. A few modern books on surgery, practice, diagnosis and bacteriology have recently been supplied by the Bureau.

(49) Purchase of Supplies.

Supplies are purchased on proposal and contract obtained by public advertisement and solicitation. Yearly contracts are made and, in an isolated station of this character where it is difficult to obtain emergency supplies, is probably the most satisfactory arrangement that can be made.

APPENDIX A

Marine Hospital at Vineyard Haven, Mass.

Appropriation for Repairs & Preservation of Public Buildings
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
14 ---	Outside entrance to space in basement occupied by disinfector with partition to separate dirty from clean end.	$300.00
18 ---	Partition in dispensary to separate space used for Surgical dressings from Dispensary.	100.00
40 ---	Water Supply and Fire protection. 430 feet 4" pipe to replace and extend 3" main. One 3" standpipe in main building to attic with one hose reel on each floor (total 4) each equipped with 50 feet 1½" linen hose and nozzle. One new two-way fire hydrant at the front of main building. Two inch pipe line to attendants building and hose reel in same equipped as above.	600.00
43 ---	Thirty foot extension to macadam driveway at main entrance.	100.00
	T O T A L ---------	$1100.00

EXHIBIT 1

Dental Hospital of Tidewater Towns, Inc.

Appropriation for Operating & Maintenance of Dental Hospital

* *

EXHIBIT 1 represents Commander's view to the order of their priority the projects and items to be accomplished immediately.

Paragraph of report.	Item	Estimated Cost.
14 ---	Provide exhaust to outer in Enlisted Dining by installation with partitions or separate little room place pan.	$300.00
34 ---	Installed in dispensary in separate room for Dental Prosthetic Fire Extinguisher.	
37 ---	Build Sheds and Fire extinguisher. One shed at each of regular and second of pair. Then if stand-pipe is made building to which are two hose reel on each floor (total 4) each equipped with 50 feet 1½" fire hose and nozzle. Two dry Co-2 fire hydrant at the front of main building. Two inch pipe line to attendants building and hose reel in area equipped as above.	800.00
42 ---	Install hot water in medical dispensary w/ pump and tank.	[illegible]
	T O T A L ----------	[illegible]

APPENDIX B

Marine Hospital at Vineyard Haven, Mass.

Appropriation for Mechanical & Electrical Equipment

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
1 ---	Running electric light wires to building No. 3, to be done by station force.	$35.00
17 ---	Extending steam feed and returns between boiler and steam dry room	25.00
25 ---	New bowl in first floor lavatory	15.00
	T O T A L ----------	$85.00

APPENDIX C

Marine Hospital at Vineyard Haven, Mass.

New Construction
****

ITEMS hereunder require Legislative Appropriation, and are recommended in the order of their relative importance for immediate action.

Paragraph of report.	ITEMS	Estimated Cost.
29 ----	New Isolation Building.	$4000.00

APPENDIX D

Marine Hospital at Vineyard Haven, Mass.

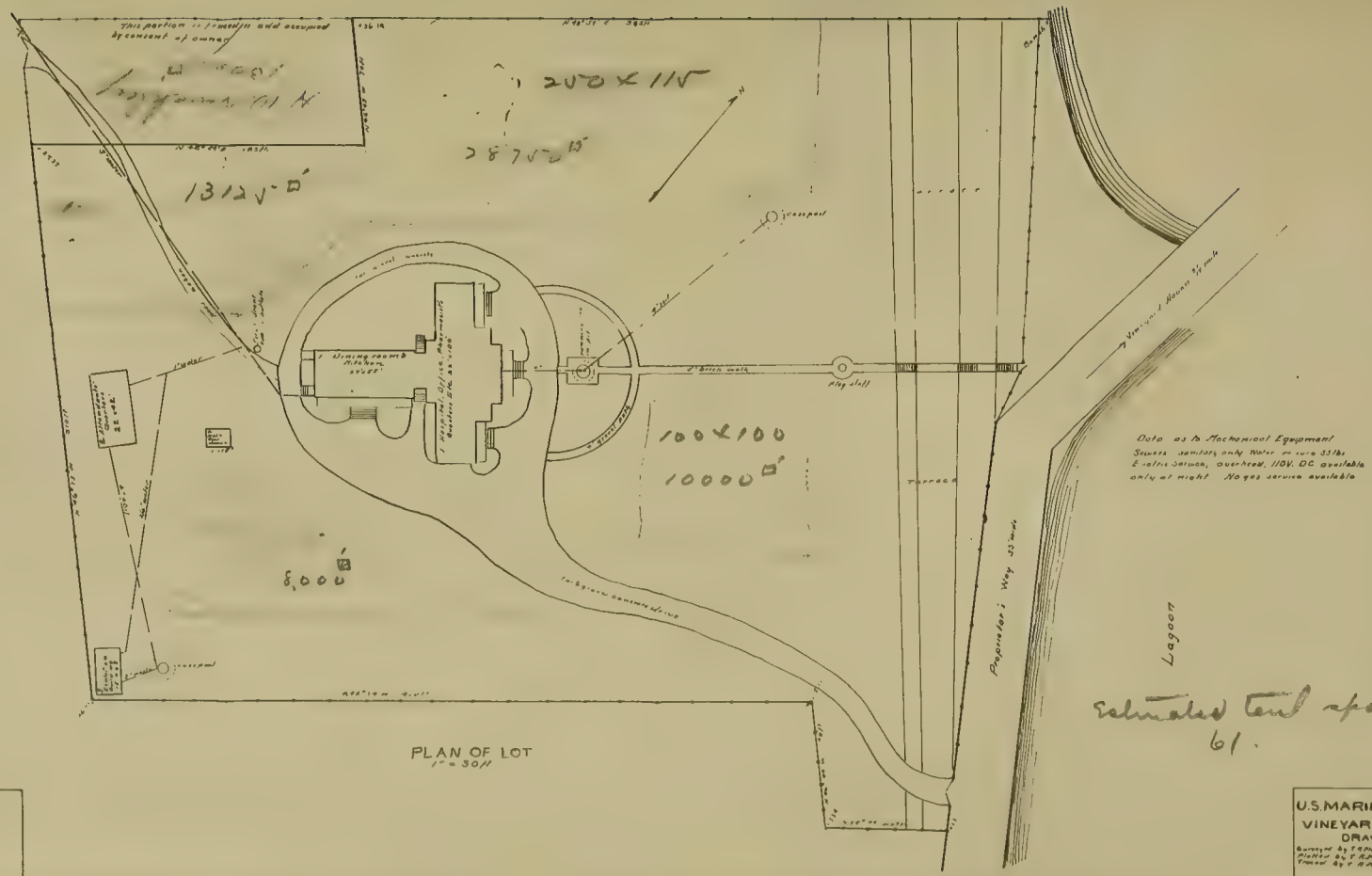
Administrative Equipment
* * * * * * * *

ADMINISTRATIVE equipment required. For details see Administrative Form.

Paragraph of report.	ITEMS	Estimated Cost.
36 ---	18 chandeliers in Building No. 1	$200.00
17 ---	4 Track steam drying room	300.00
2 ---	Office	35.00
22 ---	Ward	296.00
18 ---	Operating Room	146.00
18 ---	Dressing Room	35.00
21 ---	Dispensary	255.00
19 ---	X-ray	350.00
10 ---	Dining Room	324.00
17 ---	Laundry	54.00
26 ---	Rack for Portable tub	25.00
	Engineers Equipment	157.00
	Lawn	80.00
	T O T A L ----------	$2257.00

45 --- One additional attendant is required at $25.00 per month

48 --- Books:-- Modern proffessional books are required.


This portion is fenced and occupied by consent of owner
200 X 115
23000 □'
13125 □'
Dining rooms
Kitchen
Hospital Office
Quarters
Flag staff
100 X 100
10000 □'
8,000 □'
Proprietor's Way 33 wide
Lagoon
Data as to Mechanical Equipment
Sewers sanitary only Water pressure 35 lbs
Electric Service, overhead, 110V. DC available only at night No gas service available
Estimated land space
61.
PLAN OF LOT
1" = 30'
U.S. MARINE HOSPITAL
VINEYARD HAVEN, MASS.
DRAWING No

VIEWS OF U. S. MARINE HOSPITAL

VINYARD HAVEN MASS

GENERAL VIEW REAR

GENERAL VIEW REAR

MAIN BUILDING FRONT

MAIN BUILDING REAR

HOSE HOUSE ATTENDANTS' QUARTERS

HOSE HOUSE

LAUNDRY, SHOWING LOCATION FOR DRY ROOM

LAUNDRY

JTC

September 22, 1915.

The Honorable,

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P. R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Vineyard Haven, Mass.

Respectfully,

(Signed) Rupert Blue.
Surgeon General.

The Secretary of the Treasury.

REPORT ON THE

PHYSICAL & ADMINISTRATIVE EQUIPMENT

at the

UNITED STATES MARINE HOSPITAL

at

WILMINGTON, N. C.

BY

D. A. CARMICHAEL,
Senior Surgeon, U.S. P.H.S.

N. V. PERRY,
Supervising Superintendent,
of Construction, U.S. P.B.

A. L. PARSONS,
Civil Engineer, U. S. N.

36. Illumination.
37. Decoration.
38. Telephone & Call Systems.
39. Ice and Refrigerating Facilities.
40. Water Supply & Fire Protection.
41. Fire Alarm System.
42. Sewer & Other Drainage.
43. Streets, Roads, Walks, Fences & Grounds.
44. Wharves, Sea-Walls, etc.
45. Live Stock, Vehicles, etc.
46. Personnel.
47. Records.
48. Books.
49. Purchase of Supplies.

Appendix A - Details of Repairs under Appropriation for Repairs and Preservation of Public Buildings.
Appendix B - " " " under Appropriation for Mechanical and Electrical Equipment.
Appendix C - Items of New Construction.
Appendix D - Summary of Administrative Equipment required.

Drawings.
Photographs of Station.

GENERAL INDEX

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Photographs of Station.

U. S. MARINE HOSPITAL, WILMINGTON, NORTH CAROLINA.

Report of inspection made January, 1915, with recommendations as to policy to be pursued.

I.
GENERAL CONSIDERATIONS.

(1) Location.

The Marine Hospital reservation, consisting of some 18½ acres, is located in the eastern part of the city of Wilmington, N. C., and is bounded on the west by 6th Street, on the east and south by adjoining property and on the north side by Ann Street. A portion of the property, about one-half a square wide and two squares long (4½ acres) was given to the city of Wilmington by a revocable lease for use as a playground for white children, the ground to be leveled and improved, properly fenced, and 8th St. improved and fenced as far as Ann Street on the northwest corner of the property. This was granted on February 14, 1914. The original reservation comprised about 57.1 acres.

On July 10, 1912, an Act of Congress authorized the conveyance of a portion of the property, consisting of 34.1 acres of land, covering six whole and three half city blocks, to the Board of Education of New Hanover County, N. C., for industrial school purposes.

A large and handsome brick building has been erected on this portion of the ceded property by the Board of Education.

The enclosed portion of the property, about 18½ acres, is used for hospital purposes. It has an iron fence on the west or front boundary and wire fences on the other sides.

The hospital buildings are located near the western end of the reservation.

(2) History.

The U. S. Marine Hospital at Wilmington, N. C., was commenced in 1855 and completed at a cost, including the land, of $43,897.94 in 1860 but, owing to the Civil War and the unsettled condition of affairs, was not used as a marine hospital. It was used by the Confederates during the Civil War and, at the close of that struggle, was abandoned by the authorities and used as a dwelling for negroes for some time.

The building was partly wrecked and the fences about the property were burned. It was sold to Dr. King in 1870 for the sum of $20,000.00 One fifth was to be paid in cash and the balance in four annual installments. Only two payments were made, one of $4,020 in September, 1871 and one in July, 1874. In 1878, the property was vacated by the holder and taken possession of by the United States.

The building was repaired at a cost of about $6,000.00 and opened

---

Report of Inspector Anna Jennings, 1918, with recommendations as to policy to be followed.

I.

General Conditions.

(1) Location.

The Burns Hospital occupies, practically at some 300 meters, is located in the eastern part of the city of Kingsport, E. T., and is one of on the west by Fox Street, on the east and south by adjoining property and on the north side by Sam Street. A portion of the property, about three a square containing the square land (4) acres) was donated to the city of Kingsport by a prominent lawyer for use as a playground for white children, the grounds to be located and improved, Parkville Street, and Fox Street improved and lighted as far as the Street on the northwest corner of the property. This was granted on February 14, 1916. The original donation contained about 22.3 acres.

On July 15, 1917, an act of Congress authorized the condemnation of portions of the property, consisting of 24.1 acres of land, including and three small city blocks, for the Bureau of Industries, Department of Commerce, E. S., for industrial school purposes.

A large and handsome brick building has been erected on this portion of the public property by the Bureau of Education.

The remained portion of the property, about 1[illegible] acres, is used for hospital purposes. It has on it the hospital, the most of first [illegible] and nine houses on the other side.

The hospital buildings are essentially the members as at the [illegible].

(2) Exterior.

The E. S. Burns Hospital is [illegible] [illegible] and completed at a cost, including the land, of [illegible] [illegible] on the Civil War and the necessary expenses of [illegible] [illegible] a serious shortage. It was used by the Confederate during the Civil War and, at its close of [illegible] was abandoned by the [illegible] and used as a dwelling for soldiers for some time.

The building was partly wrecked and the frame about the grounds [illegible] [illegible]. It was sold to Dr. King in 1870 for [illegible] [illegible] this city was [illegible] and [illegible] in their medical [illegible] [illegible]. Only the grounds were used, one of [illegible] in [illegible], [illegible] [illegible] in July, 1890. In 1918, the property was [illegible] by the [illegible] [illegible] of [illegible] the United States.

The building was erected at a cost of about $4,500.00 and opened

for the reception of patients of the Marine Hospital Service on May 18, 1881.

Previous to the opening of the hospital, patients of the Service were cared for at the Seamen's Friend Society.

Since 1881, a new ward building, one and a half stories, of frame construction, with brick basement under the kitchen and a building for laundry and carpenter shop have been erected.

The Service has conducted the hospital since 1881.

(3) Need for a Marine Hospital.

Relief has been given to sailors and rivermen at this station since the fifties. The number of marine patients applying for relief is so small that the maintenance of the hospital for this class alone is not justified. As it is now used, however, for a base for public health work in the investigation of parasitic diseases, the hospital should be maintained for that purpose and any marine patients that apply for relief can be accommodated.

(4) Adequacy of Plant.

The plant is adequate for present needs of a marine hospital but, as this location has been selected for Public Health Investigation of Parasitic Diseases, additional quarters are necessary for officers and attendants engaged in Public Health Work. Officers' quarters have been provided for by appropriate legislation and, when completed, the attendants can be accommodated in the old hospital building and, when minor improvements, recommended under Section III, have been completed, the plant will be ample for the needs of these investigations and the care of seamen patients as well.

(5) Acquisition or Disposal of Land.

The reservation is ample for all present and future needs and none of it should be disposed of.

(6) Future Development or Disposal of Plant.

In all probability, any further development of the plant will be unnecessary. The present plant should be retained.

II.

SUMMARY OF IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Appropriation for Repairs and Preservation of Public Buildings.
(for details see appendix A)
Total estimated cost of work recommended, $1,055.00

(2) Appropriation for Mechanical and Electrical Equipment of Public Buildings. (for details see appendix B)
Total estimated cost of work recommended, 800.00

(3) Legislative Appropriation for New Construction.
(for details see appendix C)
Total estimated cost of work recommended,

(4) Appropriations for Administrative Equipment
(for details see appendix D)
Total estimated cost of items recommended, $5344.00

T O T A L - - - - - - - $7,199.00

(5) Personnel.

Adequate.

III.
DESCRIPTION OF PLANT AND IMMEDIATE IMPROVEMENTS RECOMMENDED.

(1) Buildings in General.

Building No. 1. Old hospital, Surgeons' and Assistant Surgeons' Quarters, two-story and basement, brick superstructure painted, sheet metal roof, plaster walls and ceilings throughout, papered, pine base and trim painted, 3¼ D & M floors throughout, local hot water heat, electric and gas light, floor area 5,028 square feet.

Building No. 2. Hospital. One and one-half story, wood frame on brick piers, clapboard exterior, shingle roof, plaster walls and ceilings painted, pine base and trim painted, 3¼ D & M floors, basement under kitchen and toilet room only has cement floor, plain brick walls, unfinished ceiling, steam heat, gas and electric light, floor area 5,070 square feet.

Building No. 3. Isolation Hospital. (Now used as administration building). One story, wood frame on brick piers, clapboard exterior, shingle roof, 3¼ D & M floors, plaster walls and ceilings painted, pine base and trim painted, stove heat, electric light, floor area 740 square feet.

Building No. 4. Laundry and Carpenter Shop. One story, wood frame on brick piers, clapboard exterior, shingle roof, D & M sheathed walls and ceilings unpainted, 3¼ D & M floors in laundry only, carpenter shop unfinished, 12 inch plank floor, stove heat and electric light in laundry only, floor area 1,276 square feet.

Building No. 5. Stable and Necropsy. One story and loft, wood frame on brick piers, clapboard exterior, shingle roof, plaster walls and ceiling and pine base and trim in necropsy room only which are painted, balance of building has no interior trim, 3¼ D & M floors in necropsy, plank floors elsewhere. Loft has 6" D & M floor, no heat, electric light, area 900 square feet.

Building No. 6. Coal Shed. One story, wood frame on sills resting on earth, clapboard exterior, shed roof shingled, no interior finish, dirt floors, no heat, no light, floor area 288 square feet.

(3) Preliminary Appropriation for Year [illegible]
(for repairs and improvements)
Total requisition sent of each [illegible]

(4) Appropriations for miscellaneous Equipment
(for details see schedule 3)
Total estimated cost of items recommended. $[illegible]

T O T A L - - - - - - - - - - - - $[illegible]

(5) Recommend.

Adopted.

VII.

[illegible]

(1) Buildings on hand.

Building No. 1. One hospital, [illegible] Quarters, two-story and basement, [illegible] frame, plaster walls and ceilings, [illegible] steam, plumbing, gas and electric light, [illegible] water closets, [illegible] water, electric and gas light, floor area [illegible] feet.

Building No. 2. Garage. One one-story [illegible] frame, [illegible] plaster exterior, [illegible] roof, [illegible] floor area [illegible] feet, [illegible] electric light, floor area [illegible] feet.

Building No. 3. Laundry. One one-story [illegible] frame on brick piers, [illegible] roof, [illegible] steam, [illegible] electric light, floor area [illegible] feet.

Building No. 4. Laundry and Storeroom Shed. One shed, [illegible] frame on brick piers, [illegible] roof, [illegible] floor area [illegible] feet.

Building No. 5. Stable and Harness. One stable and [illegible] frame on brick piers, [illegible] roof, [illegible] walls and ceiling and [illegible] floor area [illegible] feet.

Building No. 6. Coal Shed. One shed, [illegible] frame or brick, [illegible] roof, [illegible] floor area [illegible] feet.

Building No. 7. Ice House. One one-story [illegible] frame, on brick, on [illegible], floor area 280 square feet.

Building No. 7. Hydrant House. One story, wood frame, clapboard exterior, shingle roof, no interior finish, dirt floor, no heat, no light, floor area 100 square feet.

Building No. 8. Incinerator House. One story, wood frame, on concrete base, corrugated iron exterior and roof, no interior finish, cement floor, no heat no light, floor area 195 square feet.

Building No. 9. Flower Pit. Brick pit, shingle and glass roof, dirt floor, no heat, no light, not needed and should be removed from the premises as it is useless.

There are also nine tent house frames for the erection of tents in summer for accommodation of attendants in public health investigation work.

(2) Offices.

There is but one office used by both medical officers and pharmacist and at present located in the building erected for isolation purposes. This is a large room with a bath and toilet room at the western or entrance end of the building. It is well furnished but, of the office equipment, some of the property belongs to the division of public health work and some to the marine hospital proper. It is heated in winter by an old sheet iron stove. The present hospital office should be moved out of the isolation building to its original location in old administration building, when the surgeon's quarters in this building are vacated.

(3) Visitors' Reception Room.

There is no room for this purpose. Visitors go direct to the wards when visiting patients or sit on the veranda of the building. Such a room is not needed.

(4) Examining Room.

None. Examinations of patients are made in the dispensary, the office and surgical operating room. Under present conditions, a special room for this purpose is not needed.

(5) Kitchen and Diet Kitchens.

Located on first floor on west side of ward building, is a fair sized room, has a good range, no steam table or soup kettles, has one old gas range which needs to be replaced by a new one. New kitchen utensils are also needed.

There are no diet kitchens and none are needed. Food is conveyed directly to the dining room and wards, which are on the same floor, by means of trays.

(6) Pantry and Food Storage.

A small pantry adjoins the kitchen which is used for the storage of dishes and kitchen utensils.

Building No. 1. Hospital House. One story, wood frame, shingled exterior, asphalt roof, no basement, plaster finish, steel floor, no heat, no light. Floor area 117 square feet.

Building No. 2. Isolation Ward. One story, wood frame, on concrete base, exterior lime plaster and tile, no basement, plaster finish, wooden floor, no heat, no light. Floor area 295 square feet.

Building No. 3. Mortuary. Brick, tile, shingle and plaster exterior, no heat, no light, not occupied and should be removed from the premises as it is useless.

There are also nine land house houses for the resident it would be necessary for accommodation of attendants in public health investigating work.

(6) Offices.

There is but one office used by medical officers and physicians who are present inside in the building erected for isolation purposes. This is a large room with a work and table; there is the usual or office in the building. It is well furnished but is slightly overcrowded. As the physicians attached to the building work out some of the physicians attached to the building is quite small and one is the Marine Hospital proper. It is located in Vancouver by an old wooden house. The medical inspection office is used as a dispensary. Medical inspection is carried on in the isolation building, the medical officer's quarters in some buildings are located.

(7) Laboratory facilities.

There is no room for this purpose. Medicine is carried on in the main room, visiting patients or out in the verandas of the building. Drugs are kept in medicine.

(8) Equipment.

None. Instruments of physicians are used in the dispensary, the office and physical examination room. Other general conditions a required room for this purpose is not needed.

(9) Isolation facilities.

Overhead on Cover Island is used as a ship of some building, in a long distant room, has a glass roofed, no access back or any entrance, the sick are all put there which seems to be replaced by a bad one. The kitchen conditions are very poor.

There are no first aid stations and dead and sewage. Ship is connected directly to the floral room and burial, which are in the same house, or lodge.

(10) Doctor and Food Supply.

A doctor lives in the house which adjoins the Marine Hospital the storage of food and lights generally.

A small room for food storage is located in the basement of the hospital building and is convenient to a dumbwaiter leading to the kitchen.

(7) Storerooms.

The rooms for medical and hospital supplies are located in the attic of the hospital building and are ample for the needs of the station.

There is a room for storage of records on the west side of the basement of the old hospital building and one for storage of stationery on the west side of the main entrance on the first floor of the same building.

(8) Quarters for Officers.

The old hospital building is set apart for this purpose. The medical officer in charge has the entire second floor, including two very well equipped bath and toilet rooms, in which the finish has been carried to such an extent as to cover the walls and ceilings with tile. There are five rooms on this floor used principally as bedrooms. On the first floor on the south side of the building there is a large sitting room and a smaller dining room, with a small pantry adjoining and a small room made from the porch at the rear and used as a refrigerating room. In the basement there is a kitchen of good size and fairly furnished and a small room used as a laundry attached to these quarters. There is also a servants' bedroom and a toilet room in the basement for the accommodation of the medical officer's servant. These quarters are not very well furnished. New parlor and dining room furniture is needed. New carpets for the dining room and hall on the second floor and repairs to the beds, or new ones, should be purchased.

These quarters will be vacated when the new Surgeon's residence is completed and can then be used for the accommodation of junior officers and attendants.

Pharmacist's Quarters. These consist of two rooms on the north side of the first floor of the old hospital building and a small room inclosed on the adjoining porch and used as a bedroom. He also has a small dining room in the west end of the ward building. These rooms are mostly furnished by the present occupant at his own expense, and the service part of the equipment is very meager. New furniture throughout, with the exception of carpets, would be needed. The pharmacist on duty here is served a cooked ration from the hospital kitchen.

(9) Quarters for Attendants.

Three rooms on the north side of the attic of the hospital building are used for this purpose. They are poorly furnished and require rugs, chairs and wardrobes. Hospital beds are used. Of the eight attendants, two men and two women sleep at home in the town and are not on the reservation at night.

(10) Patients' Dining Room.

Located on the northwest corner of the first floor of the ward building is a small room, separated from the kitchen by a pantry and small

A small room for food storage is located in the basement of the hospital building and is convenient to a dumbwaiter leading to the kitchen.

(7) Storerooms.

The rooms for medical and hospital supplies are located in the attic of the hospital building and are larger for the needs of the station.

There is a room for storage of records on the west side of the basement of the old hospital building and one for storage of statistics on the west side of the main entrance on the first floor of the same building.

(8) Quarters for Officers.

The old hospital building is not a part for this purpose. The commanding officer in charge has the entire second floor, including his very well appointed bath and toilet room, in which the toilet has been partition so much as needed to cover the [illegible] and [illegible] [illegible]. There are five rooms on this floor used principally as bedrooms. On the first floor on the north side of the building there is a large dining room and a smaller sitting room, with a small pantry adjoining and a small room from the porch at the rear and used as a refrigerating room. In the basement there is a kitchen of good size and fairly furnished and a small room used as a laundry attached to these quarters. There is also a separate bathroom and a toilet room in the basement for the convenience of the medical officer's servants. These quarters are not very well furnished. The pantry and bathroom from the kitchen is needed. New surfaces for the dining room and hall on the second floor and repairs to the roof, if can wait, should be provided.

These quarters will be wanted when the new Surgeon's residence is completed and can then be used for the accommodation of junior officers and attendants.

Pharmacist's Quarters. These consist of two rooms on the north side of the first floor of the old hospital building and a small room adjoined on the adjoining porch and used as a bedroom. We also have a small dining room in the west end of the main building. These rooms are poorly furnished by the present occupant at his own expense, and the service part of the apartment is very meager. For furnishing throughout, with the exception of carpets, [illegible] be needed. The pharmacist is truly here in perhaps a second station from the hospital station.

(9) Quarters for Attendants.

There rooms on the north side of the hospital building are used for this purpose. They are poorly furnished and require [illegible], chairs and furniture. Hospital beds are used. If the eight attendants, two men and two women sleep at home in the same and are not on the reservation at night.

(10) Toilet in Entrance Room.

Located on the northeast corner of the first floor of the main building is a small room, separated from the lobbies by a pantry and small

hall and used by both patients and attendants, who take their meals at separate tables but are served at the same hours.

(11) Interns' and Officers' Dining Room.

A small room described under paragraph 8 (Pharmacist's Quarters) is the only one used for this purpose.

(12) Attendants' Dining Room.

Located in the same room as the patients and described under paragraph No. 10.

(13) Recreation and Smoking Rooms.

No rooms for this purpose. Patients smoke in the toilet rooms and take their recreation and smoke on the verandas when the weather permits.

(14) Disinfecting Facilities.

The only disinfecting facilities are provided in a closed room in building No. 3, by means of fumigation, which is unsatisfactory. A steam sterilizer, located in a new building, should be furnished.

(15) Incinerators.

A cast iron stove located in building No. 8 provides for incineration of dressing bandages, etc. Garbage is removed by the city. A coal burning incinerator should be installed in present fumigating room, Building No. 3.

(16) Disposal of Soiled Linen.

Removed from the wards and rooms in split wood hampers or baskets and in bundled sheets and conveyed to the laundry.

Infected linen is first taken to the laundry and then soaked in 5% carbolic solution or formaldehyde.

(17) Laundry Facilities.

The laundry is equipped with two rotary tubs, operated from a Pelton water wheel, but with no steam or water connections. There is one iron heater (coal burning) and six set tubs and an old worn out range was used to heat water for washing. This is now useless and water is heated on top of the iron heater in a boiler. A new water heater should be installed and connected to the present hot water tank.

(18) Operating and Surgical Dressing Room Facilities.

Operating Room. Located in the northeast end of first floor of ward building, is a good sized room fairly well lighted, has tiled floor and baseboard, plastered walls and ceiling lights.

hall and used by both patients and attendants, the same toilet serves it; separate lavatories but are served at the same hours.

(11) Interpreter and Officers' Dining Room.

A small room adjoining water purifying o (Immigrant's Interpreter) is the only one used for this purpose.

(12) Attendants' Dining Room.

Located in the same room as the patients and described under paragraph No. 10.

(13) Recreation and Smoking Rooms.

No rooms for this purpose. Patients smoke in the toilet rooms and take their recreations and meals on the verandas that adjoin the wards.

(14) Disinfecting Apparatus.

The only disinfecting facilities are provided in a closed room as indicated No. 4, by means of formaldehyde, which is unsatisfactory. A steam sterilizer, located in a new building, should be installed.

(15) Incinerators.

A cast iron stove located in building No. 1 provides for incineration of operating dressings, etc. Garbage is removed by the city. A combined incinerator plant is installed in present building, building No. 8.

(16) Disposal of Foulage Linen.

Removed from the wards and rooms in soiled wood hampers or bedpans and in soiled sheets and conveyed to the laundry.

Infected linen is first taken to the laundry and then sterilized in carbolic solution or formaldehyde.

(17) Laundry Equipment.

The laundry is equipped with two rotary tubs, equipped with friction water wheel, but with no steam or water connections. There is one iron washer (semi heating) and one set tubs and an old very old range not used to heat water for washing. This is not sufficient and water is heated on top of the iron heater in a boiler. A hot water heater should be installed and connected to the present hot water tank.

(18) Dormitory and Recreational Dining Room Facilities.

Dormitory Room. Located in the northwest end of first floor of main building, is a good sized room fairly well lighted, has tile floor and baseboard, plastered walls and ceiling lights.

The operating table is really an old necropsy table and should be replaced by a modern one. The pedal attachment of the instrument sterilizer is out of order and the two instrument tables need new glass tops to replace broken ones. Some new surgical instruments are needed. Sterilizing, washing up, etherizing and operating is all done in the same room.

Surgical Dressing Room. None. Dressing done in operating room. Surgical needs of the station are small, and expensive and properly divided rooms are not necessary.

(19) X-Ray Facilities.

None at station. Arrangements made by accepted proposal of Dr. Hass Lee Bellamy to do X-Ray work at $15.00 per patient when necessary. This arrangement is satisfactory.

(20) Laboratory.

Old necropsy room in the stable building is used for this purpose. The hospital proper has a poor outfit but the workers in public health problems use this room and their outfit is sufficient to take care of ordinary clinical work of the station.

(21) Dispensary.

Located on the south side of the first floor of ward building near eastern end. It is a small room fitted with plain wood shelving, sink and marble dispensing counter. The front part of the room is used as a nurses office and room for entering and recording patients admitted to the hospital. Equipment is sufficient for the station.

(22) Wards for Seamen.

Patients are quartered in a small wooden hospital building in two wards. The larger has a capacity of 12 beds normally, the smaller 5 beds. On account of the mild climate, patients can be cared for in tents the greater part of the year. Tubercular patients are housed in tents when there are such cases. The large ward is used for white patients and the small one for colored. Both classes of patients use the same toilet and bath facilities.

(23) Quiet Wards.

There are none and, under present conditions, none are needed.

(24) Wards for Revenue Cutter Officers.

There is no room provided at present for this purpose. Such a room is needed and can be provided by utilizing one of the rooms in the old hospital building, when the surgeon's quarters are vacated.

(25) Toilet Facilities.

Toilet facilities in ward hospital, Building No. 2, are very poor

The operating table is really an old surgery table and should be replaced by a modern one. The pedal attachment of the instrument sterilizer is out of order and the two instrument tables need new glass tops to replace broken ones. Some new surgical instruments are needed. Sterilizing, washing up, sterilizing and operating is all done in the same room.

Surgical Dressing Room. None. Dressing done in operating room. Surgical needs of the station are small, and expensive and properly limited rooms are not necessary.

(19) X-Ray Facilities.

None at station. Arrangements made by accepted proposal of Dr. Ross Lee Bailey to do X-Ray work at $15.00 per patient when necessary. This arrangement is satisfactory.

(20) Laboratory.

Old secretary room in the stable building is used for this purpose. The hospital proper has a poor outfit but the workers in public health problems use this room and their outfit is sufficient to take care of ordinary clinical work of the station.

(21) Dispensary.

Located on the south side of the first floor of ward building near eastern end. It is a small room fitted with plain wood shelving, sink and marble dispensing counter. The front part of the room is used as a nurses office and room for sterilizing and recently patients admitted to the hospital. Equipment is sufficient for the station.

(22) Wards for Women.

Patients are quartered in a small wooden hospital building in the yards. The larger has a capacity of 12 beds normally, the smaller 6 beds. On account of the mild climate, patients can be cared for in tents the greater part of the year. Tubercular patients are housed in tents when there are such cases. The large wood is used for white patients and the small one for colored. Both classes of patients use the same toilets and bath facilities.

(23) Quiet Ward.

There are none and, under present conditions, none are needed.

(24) Ward for Dangerous Mental Patients.

There is no room provided at present for this purpose. Such a room is needed and can be provided by utilizing one of the rooms in the old hospital building, when the attendant's quarters are vacated.

(25) Toilet Facilities.

Toilet facilities in ward hospital, building No. 5, are very poor

and used by white and colored alike. They consist of three old type America closets with high tanks, and one cast iron painted slop sink located in one room having wood floor, pine trim, painted, plastered walls and ceilings. In another room of the same description is located two cast iron enameled bath tubs, 4 sectional cast iron enameled lavatories set in one battery, having lead waste pipes and traps exposed, and one open shower bath stall; tubs stand in open room as do all fixtures. Toilet facilities are in very poor condition and should be made sanitary and white patients should be separated from the negroes. The pharmacy contains an old cast iron sink painted on the inside. This is rusted out and a new enameled iron sink should be provided. With the above exceptions, all toilet equipment is satisfactory and adequate. The toilet room in Building No. 2 should be rearranged, modernized and separate accommodations for white and colored patients provided.

(26) Portable Tubs.

One old tub without rack and in bad order on station. Sponge baths are given as a substitute when necessary. A portable tub with rack should be provided.

(27) Padded Cells.

None for care of violent, alcoholic or insane patients. An old humane restraint apparatus, consisting of jacket, wristlets and anklets, is available. No arrangements for care of such cases with local authorities. No restraint sheet. A restraint sheet should be provided.

(28) Necropsy Facilities.

A room in the stable building is provided which is ample but is now used for a Laboratory for Public Health investigations. Satisfactory, as this arrangement does not interfere with its use for necropsy purposes.

(29) Isolation Facilities.

There is one isolation building 20 ft. x 40 ft., of wood, but it is now used as an office. When the surgeon's quarters in old hospital building are vacated, the office should be moved to that building and the isolation building used for its original purpose.

(30) Out-Patient Office.

Located in the old Custom-House on the water front and consists of two rooms, a surgeon's office and a waiting room. These rooms are sufficiently adequate for the small needs of the station. Repairs are needed to the plastered walls and ceiling. A table, an instrument case and some new instruments are needed.

(31) Floor Space.

In Building No. 2, ward and hospital, the total net floor space is divided as follows:

and used by white and colored alike. They consist of three oil type boilers placed with high tanks, and one cast iron yellow ware boiler in one room having wood floor, pine trim, painted, plastered walls and ceiling. In another room of the same description is located the cast iron porcelain bath tub, 4 enclosed cast iron enameled lavatories and 1 one laundry, having load waste pipes and traps exposed, and one open sewer back wall, tubs stand in open room as do all fixtures. Toilet facilities are in very poor condition and should be made sanitary and modern, so as to be separated from the nurses. The pharmacy contains an old cast iron sink painted on the inside. This is rusted out and a new enameled iron sink should be provided. With the above exceptions, all toilet equipment is satisfactory and adequate. The toilet room in Building No. 7 should be rearranged, modernized and separate accommodations for this not salvage pantry provided.

(25) Porch Pile Tube.

One old tub without rack and in bad order on patient. Porch pants are given as a substitute than necessary. A portable tub with rack should be provided.

(27) Padded Cells.

None for care of violent, alcoholic or insane patients. An old insane restraint apparatus, consisting of jacket, straitjacket and manacles, is available. No arrangements for care of such cases with local institutions. No restraint sheet. A restraint sheet should be provided.

(28) Laboratory Facilities.

A room in the stable building is provided which is empty but is now used for a laboratory for Public Health investigations. Satisfactory, as this arrangement does not interfere with its use for laboratory purposes.

(29) Isolation Facilities.

There is one isolation building for it. 2 or 3 f., if used, but it is now used as an office. When the surgeon's quarters in the hospital building are vacated, the office should be moved to that building and the isolation building used for its original purpose.

(30) Out-patient Office.

Located in the old Custom-House on the water front and consists of two rooms, a surgeon's office and a waiting room. These rooms are satisfactorily adequate for the small number of the service. Heating are needed to the plastered walls and ceiling. A table, an instrument case and some new instruments are needed.

(31) Floor Space.

In Building No. 2, ward and hospital, the total net floor space is divided as follows:

Basements	750	square feet
First floors	2,882	" "
Second "	500	" "
	4,132	" "
Halls	937	" "
	5,070	" "

Percentage of total net floor space for hospital uses	72%
" " " " " " " living quarters (except (hall space)	10%
" " " " " " " hall space (including (quarters)	18%
	100%

In this building, the only space used as living quarters is that occupied by attendants. The old hospital building is, however, utilized entirely as quarters for the pharmacist and surgeon in charge. It contains 5,028 square feet of net floor space, divided as follows:

Basement	1,388	square feet
First floor	1,275	" "
Second "	1,443	" "
	4,106	" "
Halls	922	" "
Total	5,028	" "

(32) Bed Capacity and Space Allowed.

The large ward, for white patients, will accommodate 12 beds normally, maximum 13. The small ward, for colored patients, will accommodate 5 normally, maximum 6. The total normal capacity is 17, maximum 19. Additional patients can be cared for in tents.

The floor space allowed per patient is approximately 75 square feet. Air space, 1180 cubic feet in the large ward and 790 cubic feet in the small ward.

(33) Relief Afforded and Cost.

The following table shows the relief afforded by the station for the fiscal years 1909, 1913, 1914, and also for the period from July 1 to December 31, for the calendar years 1913 and 1914:

	Fiscal years.			Jul 1 - Dec 31	
	1909	1913	1914	1913	1914
No. days hospital relief furnished,	1843	1238	2333	785	1565
Daily average hospital patients,	5.0	3.4	6.4	--	--
Total daily cost per hospital patient,	$5.55	$10.45	$6.52	--	--
No. of hospital patients,	93	110	149	--	--
No. of out-patients,	329	300	419	--	--
No. of times treated,	488	362	530	--	--

On January 8 there were six patients, of whom two were chronics. Of the 6 patients, one was colored and five were white. There were no

tubercular patients. The maximum daily number of patients for the last nine years was 20 in May, 1906. In recent years, the maximum was 14 in July, 1914. During the fiscal year 1913, there were 74 days when there were no patients in the hospital. In the calendar year 1906, hospital relief furnished totaled 3921 days, the largest since 1905. The relief furnished in 1914 was 27% greater than in 1909 and 89% greater than in 1913. For the first six months of the fiscal year 1915 it was 100% greater than for the same period in the preceding year. The number of outpatients in 1914 was about 25% greater than in 1909 and 30% greater than in 1913.

(34) Ambulance Service.

The station does not possess an ambulance. Patients are transported in a light wagon, the stretchers being placed in the bottom. City ambulance can be utilized if necessary. Number of ambulance calls 20 to 30 a year. Facilities adequate.

(35) Heating Power Plant and Ventilation.

There are two separate heating plants, one each in building No. 1 and No. 2, which heats these two buildings. They are sufficient and ample. Other buildings are heated by stoves, none of which are ample or adequate. New heaters should be provided in laundry and isolation building now used as office.

(36) Illumination.

Buildings Nos. 1, 2, and 3 are lighted by electricity and gas. Buildings Nos. 4 and 5 are lighted by electricity only. All fixtures are satisfactory for present conditions, except those in wards which should be inclosed in opalescent globes. The wiring in these buildings is now exposed on spools and the main switch from line in attic of No. 2 to barn is located on one of the roof timbers with open fuses and has no protector between switch base and timber. These conditions are dangerous and should be corrected.

(37) Decoration.

The entire station has recently been painted inside and outside in a satisfactory manner, though the colors in wards are not those best adapted for such uses.

(38) Telephone and Call Systems.

There are two telephones directly connected with city exchange, both on the same line. One is located in the old hospital building and one in office with an extension bell to ward building.

There is an abandoned two-station intercommunicating telephone system which originally connected the old hospital with the ward building, which should be repaired and put in operation.

There are three two-bell and push button call systems connecting

subscriber patients. The maximum daily number of patients for the last nine years was 51 in May, 1918. In recent years, the maximum was 14 in July, 1919. During the fiscal year 1921, there were 74 days when there were no patients in the hospital. In the calendar year 1921, hospital admissions totalled 3921 days, the largest since 1918. The total turnover in 1921 was 57% greater than in 1920 and 8% greater than in 1919. For the first six months of the fiscal year 1922 it was 12% greater than for the same period in the preceding year. The number of patients in 1921 was about 25% greater than in 1920 and 10% greater than in 1919.

(34) Ambulance Service.

The station does not possess an ambulance. Patients are transported in a light wagon, the attendants being placed in the wagon. City ambulance can be utilized if necessary. Number of ambulance calls 20 to 30 a year. Facilities adequate.

(35) Heating Power Plant and Ventilation.

There are two separate heating plants, one used for heating No. 1 and No. 2, which heats these two buildings. They are authorized and safe. Other buildings are heated by stoves, some of which are unsafe or defective. Hay heaters should be provided in laundry and isolation building and wood as office.

(36) Illumination.

Buildings Nos. 1, 2, and 3 are lighted by electricity and gas. Buildings Nos. 4 and 5 are lighted by electricity only. All fixtures are satisfactory for present conditions, except those in some wards which should be replaced by opalescent globes. The wiring in these buildings is now exposed on upside and the main switch from line in attic of No. 2 to barn is located on one of the roof timbers where open fuses are used by patients or between switch base and timber. These facilities are dangerous and should be corrected.

(37) Water Bins.

The entire station has recently been painted inside and outside in a satisfactory manner, though the colors in wards are not those best adapted for such uses.

(38) Telephone and Call Systems.

There are two telephones directly connected with city exchange, both on one area line. One is located in the sun porch adjoining one in office with an attendant bell to ward building.

There is an abandoned two-station intercommunicating telephone system which originally connected the old hospital with the main building, which should be repaired and put in operation.

There are three two-bell and push button call systems connected

the old hospital building and ward building, the office and ward building, and the office and the old necropsy room in stable.

Each bed in the two wards has a floor plug to which flexible cord push button can be attached. Bell rings in corridors.

Facilities are adequate and in good condition.

(39) Ice and Refrigerating Facilities.

There is no refrigerating plant and none is needed. Artificial ice is delivered as desired and is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from city main at corner of Eighth and Church Streets, through 6" pipe connection to fire hydrant on reservation. Branches lead from this point to the various buildings.

Pressure is 50 to 60 pounds. City water is pumped from Cape Fear River just above the city of Wilmington and is filtered by the city. Quantity is ample and the quality is said to be good.

The station has one large cistern which takes rain water from old office building. This supply is used for drinking purposes.

There is one two-way fire hydrant in small wooden building on reservation with 150 feet of 2½" fire hose and nozzle permanently connected to each outlet. There is 100 feet of additional hose in reserve.

There are seven hose reels with 50 feet to 100 feet of 1" linen hose in the various buildings, one in each except the ward building, where there are three. Nine chemical extinguishers, 8 gallon Underwriter type, and five small ones, are distributed among the various buildings. Four of the large extinguishers are the old type and should be replaced by modern ones.

There are two city fire hydrants on 8th Street in front of hospital buildings.

(41) Fire Alarm System.

Station has a fire bell on ward building, which is struck by hand. Fire engine house is six blocks away and city fire alarm box is within two blocks. Facilities are adequate.

(42) Sewer and Other Drainage.

Sewerage is discharged through 6" vitrified pipe to city sewer in 9th Street. Storm water is not allowed in city sewer and is taken care of by vitrified pipe running easterly to 10th Street, where it discharges into the street. Tenth Street is ungraded and is a street only in name. The

the old hospital building and ward building, the office and ward building, and the office and the old morgue room in ruins.

Each had in the two units has a floor plug to which flexible hose push nozzles can be attached. Hall plugs in corridors.

Facilities are adequate and in good condition.

(39) Ice and Refrigeration Facilities.

There is no refrigerating plant and none is needed. Artificial ice is delivered as desired and is satisfactory.

(40) Water Supply and Fire Protection.

Water is obtained from city mains at corner of Fifth and Jeffers Streets, through 6" pipe connection to fire hydrant on reservation. Hydrant is 1000 from this point to the various buildings.

Pressure is 50 to 60 pounds. City water is pumped from Roanoke River just above the city of Williamston and is filtered by the city. Hardness is acute and the quality is said to be good.

The station has one large cistern which holds rain water from old office building. This supply is used for drinking purposes.

There is one two-way fire hydrant to small wooden building on reservation with 150 feet of 2½" fire hose and nozzle permanently connected to each outlet. There is 150 feet of additional hose in reserve.

There are seven hose racks with 50 feet to 1½" fire of 1" fire hose in the various buildings, one in each except the new building, where there are three. Also chemical extinguishers, 7 gallon Underwriter type, and five small ones, are distributed among the various buildings. Two of the large extinguishers are the old type and should be replaced by modern ones.

There are two city fire hydrants on 4th Street in front of hospital building.

(41) Fire Alarm System.

Station has a fire bell on main building, which is struck by hand. Fire engine house is six blocks away and only fire alarm box is within two blocks. Facilities are adequate.

(42) Sewer and Water Treatment.

Sewerage is disposed of through 8" vitrified pipe to city sewer in 4th Street. Storm water is not allowed to city sewer but is taken care of by vitrified pipe running easterly to 10th Street, where it stagnates into the street. Tenth Street is unpaved and is a street only in name. The

soil is very sandy and the water soaks away readily. Storm water from old hospital building discharges into cistern for drinking purposes. Facilities are adequate for present conditions.

(43) Streets, Roads, Walks, Fences and Grounds.

There are 50 feet of cement sidewalk just in front of the reservation entrance on 8th Street. Cement walks lead from entrance to old hospital building and to the ward building. These walks are in good condition.

There is a wooden walk from the end of the cement walk along 8th Street to Ann Street. This wood walk is in very bad and dangerous condition. It should be immediately repaired or replaced by a new wooden walk. When 8th Street is permanently graded a cement walk should be installed. Within the reservation, wooden walks in poor condition connect with the various buildings. They should be replaced by cement walks as recommended by the inspector.

There is a dirt driveway from 8th Street to stable in fair condition and, under present conditions, is adequate.

On 8th Street, there is an iron picket fence along the station boundary. The other boundaries are enclosed by wood post and iron mesh fence. There is a pedestrian and carriage entrance on 8th Street and a gate on Ann Street at the end of 9th Street, all in good condition and adequate.

The area immediately about the buildings is well kept and neat. The larger part of the reservation is sand with but little sod and undeveloped. It is sufficiently well cared for under existing conditions.

(44) Wharves, Sea Walls, Etc.

None. No water front.

(45) Live Stock, Vehicles, Etc.

The station has one horse, one light wagon used as an ambulance and one trap. The horse is seven years old and in excellent condition. The two vehicles are in fair condition. There is also an old carryall in bad condition, unserviceable and not needed. Facilities are adequate.

(46) Personnel.

On duty at this station at the time of inspection there was one commissioned officer (Assistant Surgeon), one pharmacist and eight attendants, classed as follows:- one messenger, one day nurse, one night nurse and watchman, one driver, one yardman, one pantryman, one cook and one laundress. Both of the latter are colored women.

(47) Records.

The records of the station are properly kept, with the exception

wall is very sandy and the water seeps away readily. Storm water from old hospital building discharges into cisterns for drinking purposes. Utilities are adequate for present conditions.

(44) Streets, Roads, Walks, Yards and Grounds.

There are 50 feet of concrete sidewalk just in front of the reservation entrance on 8th Street. Cement walks lead from entrance to old hospital building and to the ward building. These walks are in good condition.

There is a wooden walk from the end of the cement walk along 8th Street to Ann Street. This wood walk is in very bad and dangerous condition. It should be immediately repaired or replaced by a new wooden walk. When 8th Street is permanently graded a concrete walk should be installed. Within the reservation, wooden walks in poor condition connect with the various buildings. They should be replaced by concrete walks as recommended by the inspector.

There is a dirt driveway from 8th Street to which is fair condition and, under present conditions, is adequate.

On 8th Street, there is an iron picket fence along the entire boundary. The other boundaries are enclosed by some post and iron wire fence. There is a reservation and curbing between the 8th Street and a gate on Ann Street at the end of 8th Street, all in good condition and adequate.

The area immediately about the buildings is well kept and neat. The larger part of the reservation is sand with but little and sparse vegetation. It is sufficiently well cared for under existing conditions.

(46) Wharves, Docks, Piers, Etc.

None. No water front.

(45) Live Stock, Vehicles, Etc.

The station has one horse, one light spring wagon and one harness and one trap. The horse is seven years old and in excellent condition. The two vehicles are in fair condition. There is also an old surrey in bad condition, unserviceable and not needed. Particulars are complete.

(46) Personnel.

On duty at this station at the time of inspection there was one commissioned officer (Assistant Surgeon), one pharmacist and eight attendants, classed as follows:- one messenger, one dry nurse, one night nurse and matrons, one driver, one janitress, one janitress, one cook and one laundress. Both of the janitor are colored women.

(47) Inspection.

The records of the station are properly kept, with the exception

of the clinical records of marine patients, which are very brief and incomplete.

(48) Books.

The medical books in the station library are old and of little use for reference.

(49) Purchase of Supplies.

Supplies are purchased on accepted proposals obtained from dealers at intervals of three months and, aside from the difficulties of obtaining bids and the increased amount of clerical work, seems to be satisfactory. Purchase of supplies in open market would enable the officers in charge of the station to take advantage of fluctuations in the market.

or the clinical records of marine patients, which are very crude and incomplete.

(48) Books.

The medical books in the station library are all out of date and little use for reference.

(49) Purchase of Supplies.

Supplies are purchased on accepted proposals obtained from dealers at intervals of three months and, aside from the difficulties of transportation and the increased amount of clerical work, seem to be satisfactory. Purchase of supplies in open market would enable the officers in charge of the station to take advantage of fluctuations in the market.

APPENDIX A

Marine Hospital at Wilmington, N. C.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
25	Rearrange Toilet Rooms in Building No. 2.	$200.00
36	Protection for switch and fuse boards in barn and Building No. 2.	15.00
40	Four 3-gal. chemical fire extinguishers to replace old ones.	40.00
43	Repairs to wood walk on 8th St. and cement walks between buildings.	800.00
	T O T A L - - - - -	$1,055.00

EXHIBIT A

Marine Hospital at Vicksburg, Miss.

Appropriation for Repairs & Preservation of Public Buildings.
* *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
35	Basement Toilet Rooms in Building no. 5.	$[illegible]
36	Protection for water and fuse boxes in basement and Building No. 3.	15.00
40	Four 3-gal. chemical fire extinguishers to replace old ones.	40.00
42	Repairs to wood walk on 8th St. and cement walks between buildings.	800.00
	T O T A L - - - - - - -	$1,055.00

APPENDIX B

Marine Hospital at Wilmington, N. C.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
25	Rearrange toilet accommodations in Building No. 2.	$750.00
38	Repairs to telephone system.	50.00
	T O T A L - - - - - -	$800.00

APPENDIX - B

Marine Hospital at Washington, D. C.

Appropriation for Mechanical & Electrical Equipment.

* * * * * * * * * * * * * * * * * *

REPAIRS mentioned hereunder are in the order of their relative importance and should be undertaken immediately.

Paragraph of report.	ITEMS	Estimated Cost.
25	Emergency toilet accommodations in Building No. 2.	[illegible]
26	Repairs to telephone system.	[illegible]
	TOTAL	$800.00

APPENDIX D

Marine Hospital at Wilmington, N. C.

Administrative Equipment.

****

ADMINISTRATIVE equipment which should be immediately provided.

Paragraph of report.	ITEMS	Estimated Cost.
14	Steam Sterilizer	$1000.00
30	Office (Out-Patient)	175.00
22	Wards	1071.00
18	Operating and Surgical Dressing Room	530.00
5	Kitchen	250.00
10	Dining Room	43.00
17	Laundry	150.00
8	Officers' quarters	1020.00
9	Attendants' quarters	200.00
15	New incinerator in present fumigating room, Building No. 2.	350.00
17	New laundry water heater	35.00
35	New hot water heating equipment in Building No. 2.	400.00
36	New electric light shades for wards in Building No. 2.	20.00
	T O T A L - - - -	$5344.00

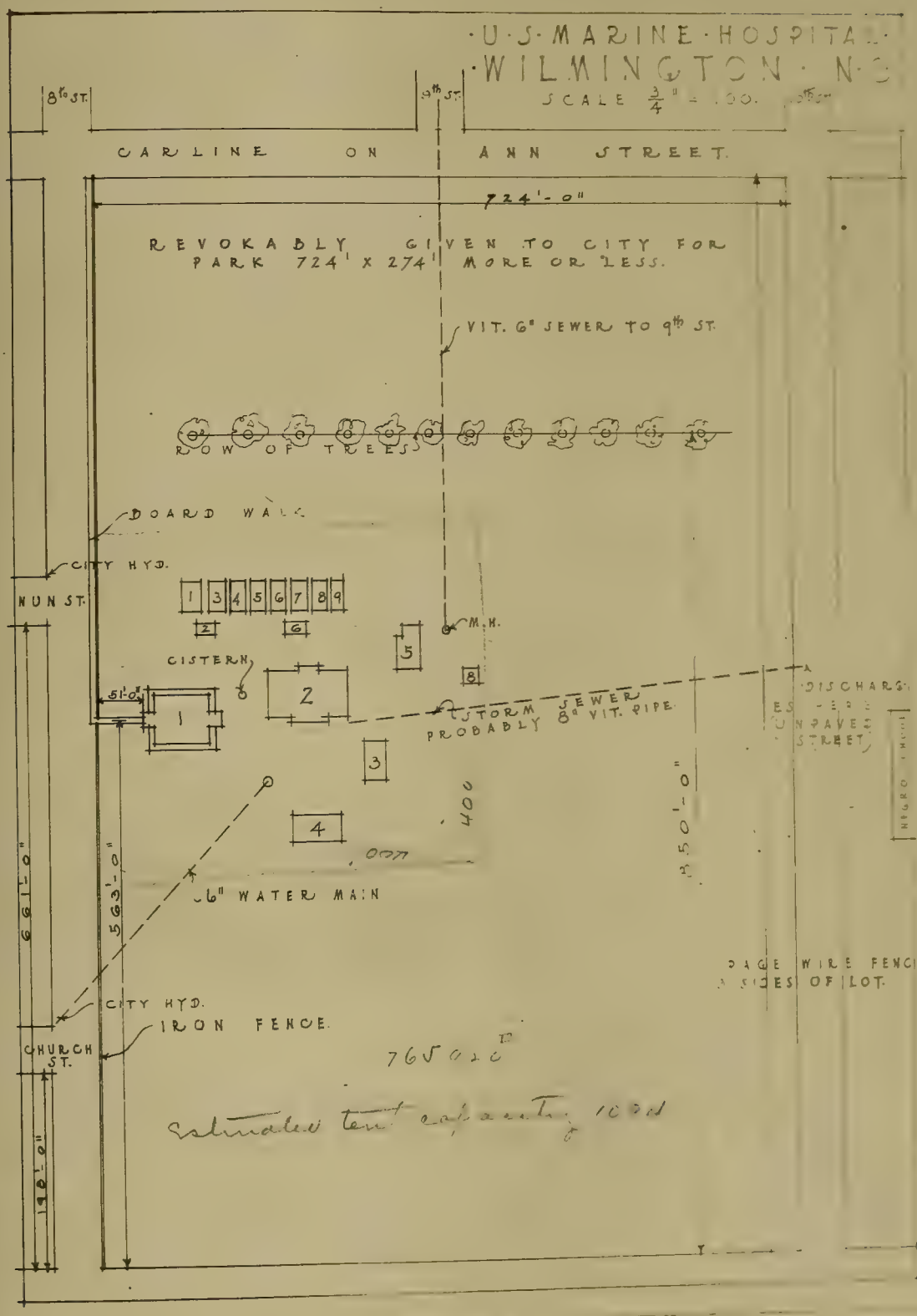
EXHIBIT 2

Marine Hospital at Vicksburg, Miss.

Administrative Equipment.

ADMINISTRATIVE equipment which should be immediately provided.

Reference of report.	Item	Cost
1.	Room Sterilizer	[illegible]
20	Office (Out-Patient)	[illegible]
22	Waits	[illegible]
12	Operating and Surgical Dressing Room	[illegible]
5	Kitchen	[illegible]
10	Dining Room	42.00
11	Laundry	250.00
8	Officers' quarters	1020.00
9	Attendants' quarters	[illegible]
15	New incinerator in present Dining Room, Building No. 2.	[illegible]
17	New laundry water heater	35.00
18	New hot water heating equipment in Building No. 2.	[illegible]
25	New electric light sconce for wards in Building No. 2.	[illegible]
	T O T A L - - - - -	[illegible]


U·S·MARINE·HOSPITAL
WILMINGTON · N·C
SCALE 3/4" = 100.
8th ST.
9th ST.
CARLINE ON ANN STREET.
724'-0"
REVOKABLY GIVEN TO CITY FOR PARK 724' X 274' MORE OR LESS.
VIT. 6" SEWER TO 9th ST.
ROW OF TREES
BOARD WALK
CITY HYD.
NUN ST.
1 3 4 5 6 7 8 9
2 6
M.H.
5
8
CISTERN
51'-0"
1
2
STORM SEWER PROBABLY 8" VIT. PIPE.
DISCHARGES UNPAVED STREET
3
4
400
250'-0"
NEGRO HOUSE
661'-0"
563'-0"
6" WATER MAIN
BARBED WIRE FENCE ALL SIDES OF LOT.
CITY HYD.
IRON FENCE.
CHURCH ST.
765 0 2 0
Estimated tent capacity 1000
198'-0"

VIEWS OF U.S. MARINE HOSPITAL

WILMINGTON N.C.

WOOD BUILDING FRONT

WOOD BUILDING REAR

REAR OF RESERVATION

SIDE OF RESERVATION

MAIN BUILDING REAR

MAIN BUILDING SIDE

VIEWS OF U.S. MARINE HOSPITAL

WILMINGTON N.C.

STABLE

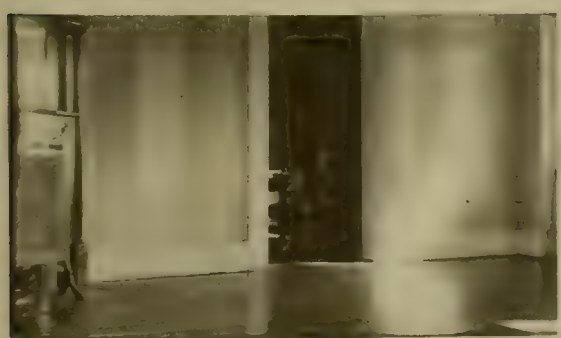
HOT HOUSE

TENT FRAMES

WARD & KITCHEN BLDG.

WARD ROOM

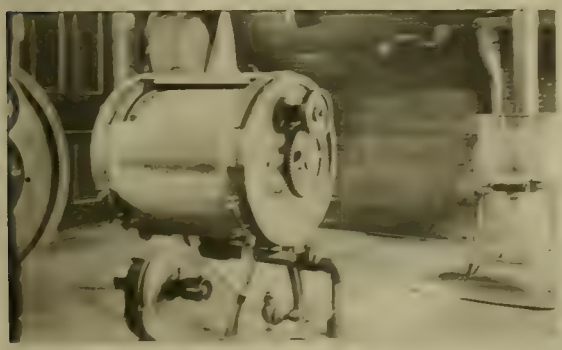
WARD ROOM



ROOM IN SURGEONS RESIDENCE

OFFICE IN INFORMATION HOSP.

U. S. MARINE HOSPITAL

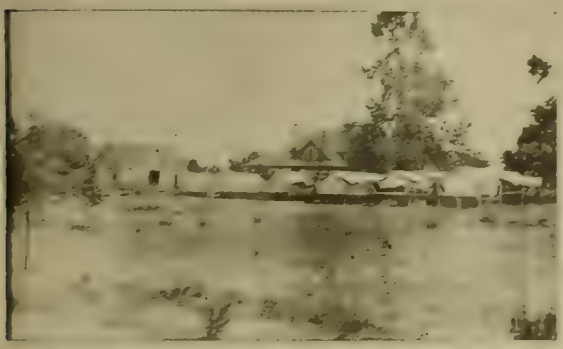


VIEWS OF U.S. MARINE HOSPITAL

WILMINGTON N.C.

HOUSE-HOUSE & OUT-HOUSE

COAL STORAGE

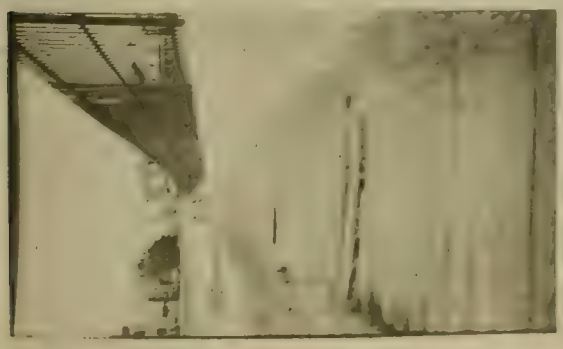


TENT HOUSES

TENT HOUSE FRAMES

STREET & SIDEWALK FRONT

STREET & SIDEWALK FRONT



JTC

October 12, 1915.

The Honorable

The Secretary of the Treasury.

Sir:

With further reference to your letter of August 30, 1915, asking if I concur in the reports submitted by the officers detailed to make an inspection of all marine hospitals and quarantine stations (except San Juan, P.R., and Honolulu, Hawaii), I have the honor to state that I approve of the recommendations of these officers regarding the marine hospital at Wilmington, N. C.

Respectfully,

(Signed) Rupert Blue.

Surgeon General.

OFFICE OF THE SURGEON GENERAL

IN REPLYING
ADDRESS THE SURGEON GENERAL
U. S. PUBLIC HEALTH SERVICE

TREASURY DEPARTMENT

BUREAU OF
THE PUBLIC HEALTH SERVICE
WASHINGTON

The Surgeon General,

U. S. Public Health Service,

Washington, D. C.

Sir:

In accordance with official orders of October 7, 1914, I have the honor to transmit herewith statistical tables of fifty-three civil hospitals in different cities of the United States, showing receipts, expenditures, donations, per diem cost, rations cost, number of patients admitted, number of attending staff, nurses staff, and employees for the years 1912 and 1913. Also brief record notes of the different civil hospitals visited in different cities of the United States.

I also attach for comparison a statistical table of the different marine hospitals under operation in the United States, relative to the same data for the year 1913.

Respectfully,

S. A. Carmichael
Senior Surgeon, U.S. P.H.S.

June 25, 1915.

The Honorable,
The Secretary of the Treasury,
Washington, D. C.

Sir:

In accordance with official orders of October 7, 1914, we have the honor to transmit herewith statistical tables of fifty-three civil hospitals in different cities of the United States, showing receipts, expenditures, donations, per diem cost, rations cost, number of patients admitted, number of attending staff, nurses staff, and employees for the years 1912 and 1913.

We also attach for comparison a statistical table of the different marine hospitals under operation in the United States, relative to the same data for the year 1913.

Respectfully,

A. A. Carmichael
Senior Surgeon, U.S. P.H.S.

A. N. Leary
Supervising Superintendent
of Construction, U.S. P.H.

A. F. Parsons
Civil Engineer, U.S. Navy.

New York, 1912.

Hon. Secretary,
The Secretary of the Treasury,
Washington, D. C.

Sir:

In accordance with official orders of October 7, 1911, we have the honor to transmit herewith a revaluation under of differ-ent civil employees in different cities of the United States, showing residence, occupations, occupations, per diem rate, salaries good, number of positions available, number of attendants still, nurses staff, and employees for the years 1912 and 1913.

We also attach for reference a statistical table of the different service employees under operation in the United States, relative to the year data for the year 1911.

Respectfully,

Director Surgeon, U.S. P.H.S.

Surgeon, Assistant Surgeon
of Quarantine, U.S. P.H.S.

Civil Engineer, U.S. Navy.

Name of Hospital	Location	Receipts	Expenditures	Donations Value of	Per Capita Cost per Day	Cost of daily ration	No. of patients Treated	No. of Attending On Staff	No. of House On Staff	No. of Nurses On Staff	No. of Employees.	Date
Maine General	Portland, Me.	$111,150.00	$111,150.00	$ 27,086.00	$2.00	$.36	2,028	32	5	3 Graduates 56 Pupils	44	1912-13
Peter Bent Brigham	Boston, Mass.	36,571.00	190,510.00	None	7.02	.53	1,370	5	34	83	130	1913
	" "	587,434.00	587,434.00		1.86	.29	17,004	94	42	201	404	1912
Boston City Hospital	" "	616,301.00	616,301.00	15,400.00	1.81	.29	18,007	99	43	214	408	1913
	" "	176,520.00	423,134.00	22,758.00	3.00	.31	6,629	106	25	211	325	1912
Massachusetts General	" "	194,576.00	444,615.00	92,745.00	3.01	.33	6,661	129	26	195	294	1913
St. Elizabeth's	" "						10,076	12	5	35	25	1912-13
	" "	90,665.00	86,334.00	14,863.00	2.00	Not given	3,927	46	14	79	57	1912
Carney Hospital	" "	105,192.00	104,096.00	19,793.00	2.00		3,944	46	14	85	59	1913
	New York, N. Y.	448,294.00	450,661.00	149,000.00	2.18	.37½	8,204	63	33	242	150	1912
Mount Sinai	" " " "	421,384.00	469,892.00	123,000.00	2.17	.37½	7,975	65	33	239	159	1913
	" " " "	138,881.00	227,826.00	Not given	2.38	.36	40,712	19	16	90	160	1912
Roosevelt	" " " "	173,425.00	254,998.00		2.51	.32	38,213	19	16	90	170	1913
St. Luke's	" " " "	305,010.00	324,771.00	13,411.00	2.09	.33	5,566	24	16	140	397	1912-13
	" " " "	Municipal	834,786.00	Municipal	1.81	.24	41,376	98	67	308	661	1912
Bellevue (Municipal)	" " " "	"	862,053.00	"	1.89	.23	41,248	101	67	317	694	1913
	" " " "	440,027.00	399,332.00	37,988.00	3.26	Not given	4,128	21	16	132	197	1912
Presbyterian	" " " "	339,450.00	418,368.00	33,140.00	3.29		3,987	20	17	130	203	1913
	" " " "	95,134.00	266,137.00	Not given	2.59	.30	14,863	32	18	125	343	1912
New York Hospital	" " " "	96,362.00	260,549.00		2.59	.30	16,007	32	18	125	343	1913
S.R. Smith Infirmary	Staten Island, N.Y.	58,510.00	78,354.00	5,019.00	2.04	.35	3,730	24	5	46	80	1912-13
Buffalo Homeopathic	Buffalo, N. Y.	85,940.00	86,248.00	6,023.00	2.26	Not given	2,254	20	3	54	56	1912-13
Buffalo General	" " "	167,638.00	162,745.00	27,500.00	1.75	.30	5,418	52	12	100	140	1912-13
St. Francis	Pittsburgh, Pa.	142,609.00	168,157.00	Not given	1.46	.43	6,629	16	16	80	89	1912-13
Western Pennsylvania	" "	285,285.00	291,505.00	None	2.02	.37	6,468	49	15	140	232	1912-13
Mercy Hospital	" "	70,000.00	90,000.00	Not given	1.65	.31	6,133	15	10	100	105	1912-13
Homeopathic Hospital	" "	146,226.00	151,186.00	12,298.00	2.93	.52	2,981	40	6	54	57	1912-13
Allegheny General	" "	220,591.00	244,000.00	None	2.24	.32	5,016	45	12	142	236	1912-13
Lakeside Hospital	Cleveland, Ohio	117,131.00	222,773.00	Not given	2.34	.40	4,069	26	19	109	389	1912-13
St. Luke's Hospital	" "	70,007.00	79,255.00	19,172.00	2.76	.57	3,883	17	4	45	40	1912-13
	Detroit, Mich.	155,327.00	161,086.00	19,000.00	2.35	.30	5,078	45	10	100	113	1912
Grace Hospital	Detroit, Mich.	176,143.00	194,204.00	10,000.00	2.66	.31	5,647	49	15	107	119	1913
St. Luke's	Chicago, Ill.	312,639.00	307,567.00	6,204.00	3.21	.38	7,870	44	19	150	213	1912-13
Provident	" "	25,726.00	25,457.00	3,486.00	1.95	Not given	960	34	3	25	22	1912-13
Augustana	" "	123,180.00	121,608.00	2,096.00	2.02	.11	2,931	16	9	90	38	1912-13

Name of Hospital	Location	Receipts	Expenditures	Donations Value of	Per Capita Cost per Day	Cost of daily Ration	No. of Patients Treated	No. of Attending On Staff	No. of House On Staff	No. of Nurses On Staff	No. of Employes	Date
Presbyterian	Chicago, Ill.	$311,497.00	$308,509.00	$23,705.00	$2.60	$.36	7,238	18	20	152	165	1912-13
City Hospital	St. Louis, Mo.	253,460.00	242,009.00	None	1.03	.29	11,287	64	49	90	265	1912-13
✓ Alexian Brothers	" " "	69,089.00	67,513.00	947.00	1.07 (?)	.20	1,648	8	6	30	45	1912-13
St. Mary's Infirmary	Cairo, Ill.	16,400.00	1,600.00	200.00	*	*	630	*	1	22	10	1912-13
Bondurant	" "	13,017.00	12,815.00	None	3.94	.57	325	2	2	5	7	1914-15
	Memphis, Tenn.	15,000.00	78,000.00	None		.39	4,949		8	14	39	1912-13
City Hospital	" "	18,000.00	88,000.00		1.41	.41	5,113	*	10	20	40	1912-13
✓ St. Mary's Hospital	Evansville, Ind.	37,858.00	37,495.00	2,073.00	2.75	.87½	1,371	40	1	30	22	1912-13
Red Cross Sanitarium	Louisville, Ky.	3,362.00	3,354.00	380.00	1.69 (?)	.32	192	*	6	6	2	1912-13
City Hospital	" "	Municipal	132,657.00	None	1.74	*	4,510	100	16	72	130	1912-13
Louisville City Hospital	" "	160,000.00	160,000.00	160,000.00	1.35	*	*	*	*	*	*	1912-13
✓ James Walker Memorial	Wilmington, N. C.	36,079.00	35,969.00	*	2.95	.41	1,211	None	4	31	30	1912
	Key West, Fla.	9,565.00	9,565.00	None			224	5	1	3	7	1912
Louise Maloney Hospital	" " "	10,000.00	10,000.00		2.74	.55	302	7	1	3	7	1913
Truro Infirmary	New Orleans, La.	181,797.00	165,560.00	5,349.00	2.73	.32	5,221	50	13	70	77	1912-13
Southern Pacific Gen. Hosp.	San Francisco, Cal.	*	118,691.00	None	2.03	.42	*	9	6	30	50	1912-13
✓ St. Luke's Hospital	" " "	71,507.00	82,391.00	15,000.00	1.62	.53	1,761	12	5	56	21	1912-13
✓ French Hospital	" " "	158,000.00	138,000.00	*	*	*	2,072	*	5	50	45	1912-13
City and County	" " "	134,215.00	134,215.00	None	1.07	.36	3,625	100	13	76	163	1912-13
St. Francis Hospital	" " "	208,300.00	178,115.00	None	4.97	.65	35,820 Hp. days	*	*	80	44	1912-13
Lane Hospital	" " "	135,849.00	137,825.00	*	1.18	.36	3,932	*	8	77	65	1912-13
German Hospital	" " "	219,370.00	218,506.00	5,412.00	*	*	3,822	15	5	80	93	1912-13
Johns Hopkins	Baltimore, Md.	325,035.00	445,266.00	*	3.03	.38	5,949	31	60	250	650	1912-13
✓ Union Protestant Infirmary	" "	92,663.00	92,641.00	490.00	2.81	*	1,168	50	6	65	46	1912-13
✓ Church Home and Infirmary	" "	103,542.00	103,542.00	*	2.00	.46	1,918	68	5	49	71	1912-13
✓ Hebrew Hospital	" "	84,982.00	86,425.00	6,839.00	2.65	.36	2,148	31	10	48	40	1912-13
Presbyterian Hospital	Chicago, Ill.	311,497.00	308,509.00	22,215.00	2.53	.38	7,238	*	*	15	147	1912-13
Michael Reese Hospital	" "	316,148.00	315,444.00	133,000.00	2.86	.36	8,104	*	*	128	*	1912-13
Cook County	" "	Municipal	759,059.00	None	1.31	*	31,924	*	*	325	*	1912-13

Note: (* Not given)

Name of Hospital.	Location.	Receipts.	Expenditures.	Per Capita Cost per Day.	Cost of Daily Ration.	Per Capita Cost Less Salaries - Medical Officers.	Number Admitted To Hospital.	No. of House Staff.	No. of Nurses.	No. of Employees.	Date.
U. S. Marine Hospital	Baltimore, Md.	$ 36,039.09	$ 36,039.09	$ 1.65	$.32	$1.15	613	6	5	14	1913
" " " "	Boston, Mass.	46,789.52	46,789.52	1.54	.40	1.10	873	5	6	17	1913
" " " "	Buffalo, N. Y.	21,780.36	21,780.36	2.37	.40	1.49	470	4	3	8	1913
" " " "	Cairo, Ill.	14,031.26	14,031.26	6.55	.37	3.51	190	2	2	7	1913
" " " "	Chicago, Ill.	44,323.92	44,323.92	3.86	.40	1.47	542	6	8	17	1913
" " " "	Cleveland, Ohio.	[illegible]	[illegible]	1.24	.34	1.80	423	3	4	12	1913
" " " "	Detroit, Mich.	25,586.42	[illegible]	3.06	.34	2.23	288	5	3	11	1913
" " " "	Evansville, Ind.	14,178.61	14,178.61	4.00	.36	2.79	135	2	[illegible]	7	1913
Tuberculosis Sanitarium	Fort Stanton, N. Mex.	117,017.29	117,017.29	1.99	.41	1.75	314	7	5	52	1913
U. S. Marine Hospital	Key West, Fla.	9,794.84	9,794.84	2.88	.42	2.15	134	2	2	5	1913
" " " "	Louisville, Ky.	16,498.59	16,498.59	2.82	.21	2.78	278	4	3	8	1913
" " " "	Memphis, Tenn.	16,054.58	16,054.58	2.58	.29	1.88	374	3	2	9	1913
" " " "	Mobile, Ala.	16,174.39	16,174.39	2.60	.37	1.54	404	4	2	8	1913
" " " "	New Orleans, La.	27,851.80	27,851.80	2.36	.61	.92	454	6	3	16	1913
" " " "	New York, Stapleton, S.I.	46,146.10	46,146.10	1.71	.96	1.39	1028	8	9	20	1913
" " " "	Pittsburgh, Pa.	14,684.36	14,684.36	3.50	.32	2.52	185	2	2	7	1913
" " " "	Portland, Me.	23,867.17	23,867.17	3.32	.38	2.70	240	3	2	10	1913
" " " "	Port Townsend, Wash.	15,895.65	15,895.65	1.27	.33	1.26	280	3	4	8	1913
" " " "	San Francisco, Cal.	54,923.12	54,923.12	1.45	.30	1.[illegible]	1057	7	7	24	1913
" " " "	Savannah, Ga.	23,999.03	23,999.03	2.61	.38	1.[illegible]	334	4	3	6	1913
" " " "	St. Louis, Mo.	18,828.64	18,828.64	2.30	.32	1.50	258	4	3	9	1913
" " " "	Vineyard Haven, Mass.	11,995.77	11,995.77	3.02	.39	2.28	112	2	1	7	1913
" " " "	Wilmington, N. C.	10,901.22	10,901.22	*10.44	.37	2.25	109	2	2	6	1913

Note: (*Subsistence of Public Health Employees and Patients included in this item)

TRURO INFIRMARY, NEW ORLEANS, LA.

This hospital is located on Pyrrama Street, New Orleans, composed of a group of buildings constructed of brick, three stories and basement arranged in the form of a quadrangle with a central court. The interior construction is plastered walls hard finished, hard pine floors and terrazzo in the halls and toilets and operating suite. The side halls and wards are covered with strips of battleship linoleum, bordered with a wooden border instead of brass. There are several small and large wards and quite a number of private rooms. Each ward and set of rooms is provided with a diet kitchen and surgical dressing room. The surgical operating section is complete and up to date, as well as the X-ray outfit. The laboratory is somewhat cramped for room, but is well equipped. The kitchen is large and very complete. The main kitchen is located in the basement and there is an auxiliary kitchen fitted with gas ranges on the second floor.

A substantial well designed and handsomely furnished nurses' home adjoins the hospital proper. It cost the sum of $50,000.00.

The painting colors are white, grey, and in some of the wards light blue.

Notes by:

S A Carmichael
Senior Surgeon, U.S. P.H.S.

DR. WALKER'S SANITARIUM, EVANSVILLE, INDIANA.

This consists of an older brick building with a new extension of three stories and a basement. The older building contains offices, examination rooms, laboratory, X-ray rooms, kitchen and operating rooms. The new extension is devoted to wards and private rooms. There is a silent call system in use with colored lights in the corriders. The operating suite has cement floors painted, with Keene cement walls. Kitchens and diet kitchens are placed where needed.

The X-ray outfit is very complete, as well as the laboratory. In the latter the sinks are placed in the center of the room instead of against the walls. This is claimed to be more sanitary and allows greater freedom of movement.

The floors in the old building are hard pine and in the new building terrazzo, tile and composite.

Painted colors are light green, cream and yellow.

Notes by:

S A Carmichael
Senior Surgeon, U.S. P.H.S.

U. S. NAVAL TUBERCULOSIS SANITARIUM, LAS ANIMAS, COLO.

This sanitarium is located at Fort Lyon, an abandoned military post about seven miles from the town of Las Animas. The reservation comprises about 916 acres and is located on a plateau overlooking the Arkansas River. The buildings are arranged around the old Military Parade Ground. Most of the old army adobe and stone structures have been utilized as far as possible. Added features are quarters for sick officers, infirmary for the sick, lean-to buildings with porch arrangements for outdoor sleeping, designed by Civil Engineer A. L. Parsons, U. S. Navy. These lean-to structures are used for those requiring rest. The other buildings are used for ambulant cases.

A special treatment of tuberculosis at this sanitarium consists of the inhalation of iodine and oxygen administered by a special apparatus. It is claimed that this treatment is very successful, and it is remarkable that during the visit to this station little or no coughing was heard, which is usually very much in evidence at other institutions of this kind.

Aside from the lean-to buildings and the sick officers' quarters there are no special features of architecture. A farm and garden is conducted in connection with this establishment.

There are good roads and easy transportation from Las Animas on the line of the Santa Fe Railroad. The elevation is 3,800 feet above the sea level. There is plenty of water and the climate is excellent.

For the amusement of inmates there is an entertainment hall, an excellent band of music, a billiard room and a bowling alley.

Notes by:

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Senior Surgeon, U.S. P.H.S.

[illegible]

[illegible]

[illegible]

MASSACHUSETTS GENERAL HOSPITAL, BOSTON, MASS.

The original building is constructed of cut stone, has stone floors in the halls and corridors and stone stairways with iron railing. This hospital accommodates about 300 patients daily, and the nursing staff is very large. There are 200 graduate nurses and about 100 undergraduates on duty in the hospital. There are also an abundance of orderlies for cleaning and ordinary work about the hospital. The original size of the building has been increased by the erection of several new structures, the most noticeable of which are the surgery and out-patients departments. The surgical division is very complete, has six or eight operating rooms divided into aseptic and septic divisions. There are also numerous quiet, recreation, etherizing, surgeon's bath and wash-up rooms. Utensil sterilizers adjoin each ward and of an original design, constructed of copper and operated by steam. Large corridors adjoin the wards; particular design attached to the foot of the bed by which the latter is suspended and propelled on a central roller renders it easily removed from the wards to the porches. A special steel spring and two mattresses are used on each bed. Mattresses are sterilized by formaldehyde in a special room designed for that purpose. The mattresses being suspended on hooks attach to a traveling crane which delivers them automatically at a special spot after disinfection. Floors of many kinds are found throughout this hospital, cement, hard pine, battleship linoleum, tile, stone, and composite or asbestolith. The preference is given to battleship linoleum, glued to a level cement base and to hard pine. The latter is considered expensive to keep in order. A cement floor in the out-patients department has been treated with paraffine, and although the floor has been laid down and in use for a period of 12 years and over 700 patients walk over it daily, it shows hardly any signs of wear and is free from the fine dust arising from untreated cement floors. The out-patients department is very well equipped and treats from 700 to 800 patients daily.

The clinical records of this hospital are very complete, very systematically arranged and altogether admirable. An excellent library for the use of the house staff is maintained.

The general colors and painting in this building are light cream, yellows, greens and white.

Notes by:

A H Carmichael
Senior Surgeon, U. S. P.H.S.

PETER BENT BRIGHAM HOSPITAL, BOSTON, MASS.

This hospital group consists of a central executive building with medical and surgical pavilions on each side consisting of five stories and a basement. Each story is shorter in length than the lower one, in order to provide more light and air. Open corridors connect the different buildings.

A special feature in this hospital is heating the floors by steam beneath the bed line. Elaborate surgical, operating and dressing rooms, quiet rooms, solaria and recreation rooms are numerous. There is a special building of corresponding type for a nurses home. There is an abundance of instrument, dressing and utensil sterilizers. There is a special arrangement for flushing toilets.

The floors are composite, pine, cement, and battleship linoleum, the latter is preferred.

There are flush panel doors in this hospital throughout and special door stops. The kitchen, dining, serving and diet kitchen rooms are very complete.

The painting colors in this hospital for walls and ceilings are light and dark shades of grey and light straw color.

Notes by:

S.A. Carmichael
Senior Surgeon, U.S. P.H.S.

ELLIS ISLAND IMMIGRATION STATION.

There are both hospitals for detention and isolation, four stories and a basement and divided by corridors. The floors are hard pine, composite, cement, terrazzo and linoleum. There are connecting corridors and central corridors through each hospital group. Diet kitchens, toilets and quiet rooms are attached to each ward. There are psycopathic wards for the insane. Mostly children are detained in a contagious group of hospitals.

The surgical division has a modern equipment in rooms and appliances. The X-ray outfit is not very good. Female nurses are employed and orderlies for menial work.

The painting tints are light yellows, creams and grey.

Notes by:

A A Carmichael
Senior Surgeon, U.S. P.H.S.

MOUNT SINAI HOSPITAL, NEW YORK, N.Y.

This hospital has bright sunny wards, diet kitchens, toilets, quiet and recreation rooms in abundance. The floors are mostly hard pine in the wards and rooms; in the halls and toilets terrazzo.

A special feature of this hospital is a linoleum strip down the center of each ward, bound on the edges with a brass binding. Reception and examining rooms are located on the first floor. The surgical division is very complete. Operating, dressing, etherizing and sterilizing rooms are numerous. The principal operating room is floored, walled and ceiled with white marble. It was a gift to the hospital and cost $50,000.

The roof of this building is used for recreation purposes, and the upper story of one wing for isolation of suspicious cases. There is a special boiler in this unit with steam connection for disinfecting infected clothing.

The kitchen and food storage rooms are very complete, and the nursing staff and orderly force is large. Each ward is provided with a recreation room. The X-ray outfit is very complete, and the hospital throughout very clean and neat in appearance.

Painted colors are light creams and yellows with shades of green.

Notes by:

S. A. Carmichael
Senior Surgeon, U.S. P.H.S.

[illegible]

[illegible]

[illegible]

SEA VIEW TUBERCULOSIS HOSPITAL, SEA VIEW, STATEN ISLAND, NEW YORK.

This hospital is located at Todt Hill, Manor Road, Staten Island, N.Y. The buildings are arranged around a crescent. Administration, kitchen, dining hall, power house, laundry, and private room pavilion are placed in the center and ends of the concave side of the crescent and are connected by corridors. On the convex side of the crescent are the hospitals, eight in number, four stories each and a basement. Each building is a complete hospital in itself, and each building has abundant veranda space and solaria uninclosed for each floor. It is well equipped with furniture, great abundance of sterilizers and an elevator for each building. Connecting corridors run between each building and the main crescentic corridor. The kitchen is large and very complete in equipment.

A special railway for the delivery of kitchen and other supplies runs under the corridors from the laundry and power house, which ends under the administration building.

Admitting and examining rooms with toilets for men and women are located on each side of the administration offices. A special car like a cash carrier is hung on a track suspended from the ceiling in one of the tunnels under the main corridor and is used to convey food from the kitchen to the different parts of the building where there are dumb-waiters. The buildings are of cement with red tile roofs, flush panel doors; floors in lavatories, baths and toilet rooms are of tile. Wards and corridors are of hard pine. Capacity of hospital is 1,014 beds. This hospital has terrazzo bases with wooden floors. The operating department is very elaborate and complete, with division for males and females, septic and aseptic rooms. A new floor material shown in this hospital was compressed cork which was laid down at a cost of $1.25 per foot. There is a large hydrotherapeutic room on the first floor of each hospital, with elaborate equipment. Laundry plant is extensive and fitted with all modern machinery.

The painting colors are light green, white, cream and light yellow.

Notes by:

S A Carmichael
Senior Surgeon, U.S. P.H.S.

The painting colours are light green, white, green and light yellow.

BUFFALO HOMEOPATHIC HOSPITAL, BUFFALO, N. Y.

This is a four story and basement building, steel frame and cement constructed in the form of a quadrangle with open court. The wards and executive buildings are on the north and west sides, and the nurses' home on the south side. The floors are generally hard pine and terrazzo, and basement cement.

There are many private rooms, small wards, solaria and recreation rooms at the end of each corridor. Silent call system for the nurses is in use. The waiting and examining rooms are on the first floor. The surgical suite is complete and contains septic and aseptic, operating rooms, dressing, etherizing and sterilizing rooms. There are also special examining rooms for the eye, ear, nose and throat cases.

A special feature of this hospital are what are called the utility closets which contain racks for ward utensils. These are heated by steam and ventilated through the roof by an exhaust fan. The roof of the building is used for recreation purposes. The kitchen, dining room and diet kitchen equipment is very good. There is also a refrigerator system and an extension of this joins the mortuary where cadavers may be kept in a closet in cold storage until such time as may be desired. The X-ray outfit is complete. There are plenty of nurses and ordinary help. The hospital is very clean and in good order.

Painted colors are light green, white and light yellow.

Notes by:

D A Carmichael
Senior Surgeon, U.S. P.H.S.

LAKESIDE HOSPITAL, CLEVELAND, OHIO.

The executive, ward, kitchen and nurses' home buildings are constructed of white brick, four stories in height, with a basement, and built around the central corridor. The power house and kitchen are placed at some distance from the central corridor, and an isolation house is located between the former and the surgical division on the west side. The floors are terrazzo, hard pine, composite, linoleum, cork and cement.

The wards are well lighted, and there are toilet rooms, diet kitchens and recreation rooms for each ward. There are numerous private rooms and a silent call system for nurses is in use. The operating suite is very complete; it contains operating rooms, dressing rooms, etherizing, sterilizing and wash-up rooms in abundance.

This hospital uses nitrous oxide gas and oxygen as an anaesthetic, with ether at times as an auxiliary. This nitrous oxide gas is prepared at the hospital and purified by a special process, the invention of Dr. Warner, the superintendent. It is claimed that by this method anaesthesia is easily produced and easy to recover from, and that no post-operative effects are noted, such as nausea etc.

There are special arrangements for the reception and entrance of visitors to patients at the east side of the executive building. The reception room has a special door and check system for all who enter.

Painting colors are cream, light yellow and white.

Notes by:

Senior Surgeon, U.S. P.H.S.

Yours by:

COOK COUNTY HOSPITAL, CHICAGO, ILL.

This is a new building, large structure, 7 stories and attic, constructed of cement and adjoins the old Cook County Hospital. The floors are composite, tile, terrazzo and linoleum. There are spacious offices, reception room, wards, quiet rooms, solaria, roof gardens, etc., in abundance. The admitting and examing rooms are quite numerous and complete. The surgical division is admirable and the x-ray outfit is very complete. The kitchen, serving and diet kitchens are numerous and well equipped. The toilets throughout are adequate. The out-patient department is well designed and completely furnished. The old hospital building is used for chronic and tubercular cases.

Painting colors are white, cream, brown and light yellow.

Notes by:

S A Carmichael
Senior Surgeon, U.S. P.H.S.

PSYCHOPATHIC HOSPITAL, CHICAGO, ILL.

This hospital was visited principally on account of its design and construction. It is of brick construction on steel frame, with a special design for windows, a grating that is hidden by the glass window, and hardly visible from the outside. The building is arranged on the plan of an "E", and all rooms are well lighted by windows. There are five stories. Wards and small rooms are well equipped for the treatment of mental diseases. There are abundant toilet and hydrotherapeutic appliances. The floors are hard pine, terrazzo and composite. There are special locks for the doors in which the key is applied to the door handle which contains the lock.

There is a special arrangement for admitting visitors so that they do not come into the general part of the building. There is also a special room resembling a small court room for the hearing before a judge of insane cases. The top floor of the building is largely devoted to examination, laboratory, observation and hydrotherapeutic purposes. The kitchen at the rear of the building is in a projection between the arms of the "E" at about the center, and is connected with the main building by a corridor. It is claimed that this arrangement prevents the odors of cooking from entering the building. The building cost about $600,000.00, is an excellent structure, and well constructed and equipped for the expenditure.

The painting colors are white and grey.

Notes by:

S A Carmichael

Senior Surgeon, U.S. P.H.S.

CITY HOSPITAL, MEMPHIS, TENN.

This hospital consists of a central executive building and two 3-story pavilions of brick with basement. The corridors and wards are not well lighted. The floors are hard pine, composite and terrazzo. There is a childrens' hospital at the rear of the main building, three stories in height, well lighted and adequate for the purpose.

The surgical unit of the main hospital is fair.

The painting colors are deep yellows and creams.

Notes by:

S A Cosgrove

Senior Surgeon, U.S. P.H.S.

ST. MARYS HOSPITAL, CAIRO, ILL. (SISTERS OF CHARITY)

This is a two story and basement brick building consisting of a central structure and two wings. The wards are well lighted and cheerful.

The floors are hard pine, tile and terrazzo. The surgical division is well arranged and practical.

Painting colors are light greens, creams and yellows.

Notes by:

D A Carmichael
Senior Surgeon, U.S. P.H.S.

QUARANTINE STATION, BOSTON, MASS.

This station is located on Gallups Island, five miles from the foot of Atlantic Street, Boston, Mass. The island has an area of about 22 acres and has detention barracks, with dining room and lavatories for the accommodation of about 600 steerage passengers. There are two of these buildings, one for males and one for females.

Standee bunks are used, and the wire of these bunks is painted to preserve it from rust, with good results. There are also isolation hospitals with four wards in each, steam sterilizing plant and three additional isolation houses with each of about six-bed capacity. There is also a stable and store house, wharf, boarding tug, gasoline launch, and keeper's house.

When fumigation is necessary the pot method is employed. The sterilizer and steerage detention buildings can be heated from the boarding tug if it is not desired to use the main plant.

Electric current for lighting is generated on the place.

Notes by:

S A Carmichael
Senior Surgeon, U.S. P.H.S.

Respectfully yours,

[illegible]

NEW YORK QUARANTINE.

The boarding station is at Stapleton, S. I., and also the residence of the officer in charge; the offices and the new $32,000.00 laboratory are located there. The boarding and other vessels of the quarantine station are docked at Stapleton, S. I.

In connection with the New York quarantine are two islands, Swinburn and Hoffman Islands.

Swinburn Island is used for detention purposes only. It has barracks for steerage and cabin passengers, employees' quarters, dining room, disinfecting plant, lavatories, toilets etc. It can accommodate 1,000 under observation, and the capacity can be expanded by the use of tents, for which there is sufficient room. There are also special isolation buildings for suspicious cases.

Hoffman Island is used for the care of those sick with contagious diseases. It has isolation hospitals complete in equipment, sterilizing plant, quarters for officers and attendants, store room, toilets and lavatories. The buildings on the island are mostly of brick, and the floors are of cement and wood. The laboratory building is located at Stapleton, S. I. It is a three story and basement cement building, equipped for pathological work. This is a new structure just completed at a cost of $32,000.00.

Fumigation of vessels at New York is done by the pot method in a double compartment basin of heavy galvanized iron. The inner compartment contains the burning sulphur, and the outer contains the water which surrounds the former. Special furnaces and hose are not now used.

The expense of boarding and maintenance of those sick and detained and fumigation is charged against the vessel in quarantine.

Notes by:

S A Carmichael
Senior Surgeon, U.S. P.H.S.

[illegible]

[illegible]

[illegible]

COST OF CONSTRUCTION OF

EMERGENCY HOSPITAL

WASHINGTON, D. C.

Cost of structure, inc. mechanical equipment.	$ 465,000.00
Cost of hospital equipment (beds, etc.) . . .	35,000.00
Normal bed capacity	141
Cost of structure, per patient. . . . . about	3,300.00
Number open wards	5
Number private rooms.	39

It will be noted from the above that if a hospital of 141 bed capacity costs $465.000 to erect, a hospital of 200 bed capacity should cost about $660,000.00 to erect.

COST OF CONSTRUCTION OF

EMERGENCY HOSPITAL

WASHINGTON, D. C.

Cost of structure, inc. mechanical equipment.	[illegible]
Cost of hospital equipment (beds, etc.) . . .	[illegible]
Normal bed capacity	[illegible]
Cost of structure, per patient. . . . . about	3,300.00
Number open wards	[illegible]
Number private rooms.	39

It will be noted from the above that it is a hospital of 1[illegible] bed capacity costs $[illegible].00 to erect, a hospital of [illegible] bed capacity should cost about $660,000.00 to erect.

COST OF CONSTRUCTION OF

COLUMBIA HOSPITAL

WASHINGTON, D.C.

Cost of structure, including mechanical equipment	$ 300,000.00
Cost of hospital equipment (beds, sterilizer, etc.)	75,000.00
Normal bed capacity	130

The above "costs" are approximate figures.

It will be noted from the above that if a hospital of 130 bed capacity costs $300,000.00 to erect, a hospital of 200 bed capacity should cost about $450,000.00 to erect.

COST OF CONSTRUCTION OF

COLUMBIA HOSPITAL

WASHINGTON, D.C.

Cost of structure, including mechanical equipment	$ 300,000.00
Cost of hospital equipment (beds, sterilizer, etc.)	75,000.00
Normal bed capacity	100

The above "costs" are approximate figures.

It will be noted from the above that if a hospital of 100 bed capacity costs $300,000.00 to erect, a hospital of 500 bed capacity should cost about $450,000.00 to erect.